HITACHI
SERVICE MANUAL

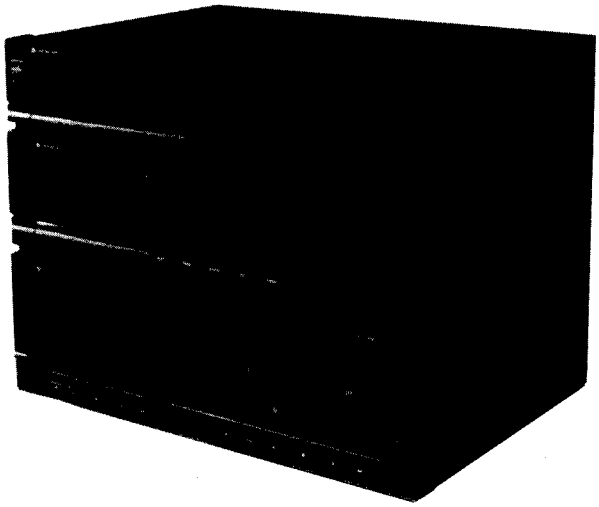
TY | No. 554E

HRD-MD58

[ES, VS, KS, ZS, VK, BS, SA, EW]

AQ05

TAPE 1 : HTY-3300D chassis
TAPE 2 : HTY-3600D chassis



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SAFETY PRECAUTIONS

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi replacement parts. Especially critical parts in the power circuit block should not be replaced with other makers. Critical parts are marked with ⚠ in the circuit diagram and printed wiring board.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

SPECIFICATIONS

● GENERAL

Power supply: AC: 220V, 50 Hz (for ES, VS, KS, ZS, VK)
AC: 240V, 50 Hz (for BS, SA)
AC: 110—120V/220—220V/230—240V, 50/60 Hz (for EW)

Power consumption: 280W

Dimensions: 370(W) x 284(H) x 285(D) mm

Weight: 8.8 kg

● AMPLIFIER SECTION

Power output (Both channels driven): 50 W/ch + 50 W/ch (8 ohms, 1 kHz, T.H.D. 0.7%)

Total harmonic distortion: 0.05% (at 1/2 power output)

Input sensitivity/impedance: PHONO: 3mV/47 kohms
(except W.Germany and Italy)
3.5 mV/47 kohms
(for W.Germany and Italy)
AUX: 90mV/22 kohms
(except W.Germany and Italy)
120mV/22 kohms
(for W.Germany and Italy)

Load impedance: Speaker: 8 to 16 ohms

S/N ratio (IHF A network): PHONO: 70 dB
AUX: 76 dB

● TUNER SECTION

Reception frequency: FM: 87.50—108.00 MHz (50 kHz steps)
MW(AM): 522—1,611 kHz (9 kHz steps)(for EW)
530—1,710 kHz (10 kHz steps)(for EW)
MW(AM): 522—1,611 kHz (9 kHz steps) (except EW)
LW: 153—281 kHz (1 kHz steps) (for ES, VS, BS, VK)

Sensitivity: FM: 1.3 μV (13.7 dBf)
MW(AM): 40 μV (S/N 26dB)
LW: 400 μV (S/N 26 dB) (for ES, VS, BS, VK)

S/N ratio: FM: 72 dB(mono), 68 dB(stereo) (IHF)
63 dB (mono), 58 dB (stereo) (IEC, unweighted, Q-peak)
60 dB (mono), 55 dB (stereo) (IEC, weighted, Q-peak)
MW(AM): 50 dB

FM selectivity: 60 dB (±300 kHz)

Stereo separation: 40 dB (1 kHz) (except W.Germany and Italy)

Antennas: FM: External antenna (75 ohms, unbalanced)
MW(AM)/LW: Loop antenna or external antenna

TAPE DECK SECTION

Track system: 4 tracks 2 channels stereo

Recording system: AC bias

Tape: Normal, Chrome (CrO_2), Metal

Frequency response: Normal: 40—14,000 Hz
CrO_2: 40—15,000 Hz
Metal: 40—16,000 Hz

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.

STEREO CASSETTE RECEIVER

August 1987 TOYOKAWA WORKS

DISASSEMBLY

1. Cover (Fig. 1)

Remove 6 screws at ① and 3 screws at ② and remove in the direction of the arrow.

Note: Lifting the back part of the cover and removing it will break the tabs on the front panel, so pull the cover toward the back after lifting it straight up first.

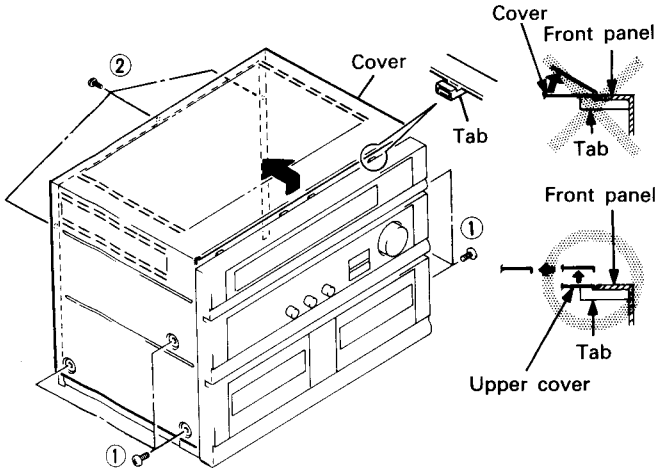


Fig. 1

2. Volume P.W.B. (Fig. 2)

Remove the VOL knob. VOL indicator holder and the nut from the volume P.W.B.. Remove the volume P.W.B. connector Ⓐ, (3 Places) and the main P.W.B. connector Ⓑ (1 place).

3. Front Panel (Fig. 2, 7-2)

Remove 2 screws at ③, 2 screws at ④ and 4 screws at ⑤. Remove connector Ⓒ (headphones P.W.B. (1 place) and main P.W.B. (12 places) -- a total of 13 places -- and remove the front panel by pulling it toward the front (see Fig. 7-2).

Note: The LED socket is bonded to the front panel, so if the VOL indicator holder is forcibly pulled out the socket cord may break. Be carful of this.

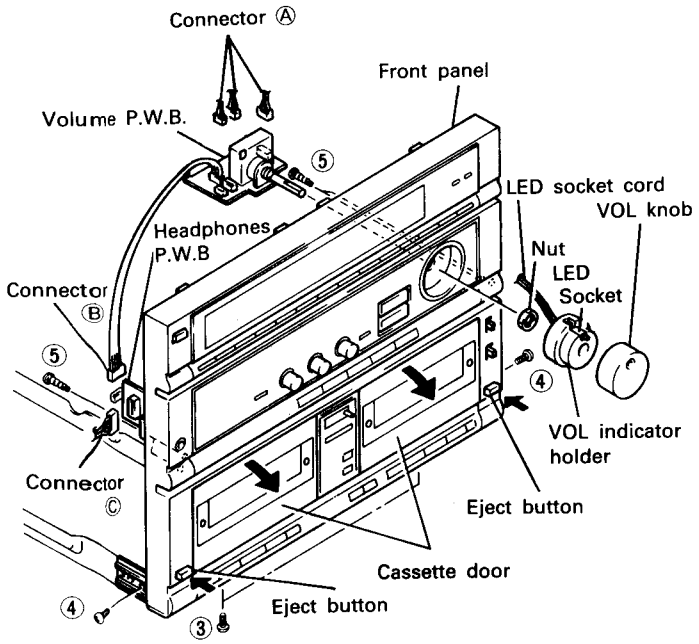


Fig. 2

Note: Once the volume P.W.B.has been removed, the P.W.B. is reinstalled pulling the socket cord out from the back as in Fig. A.

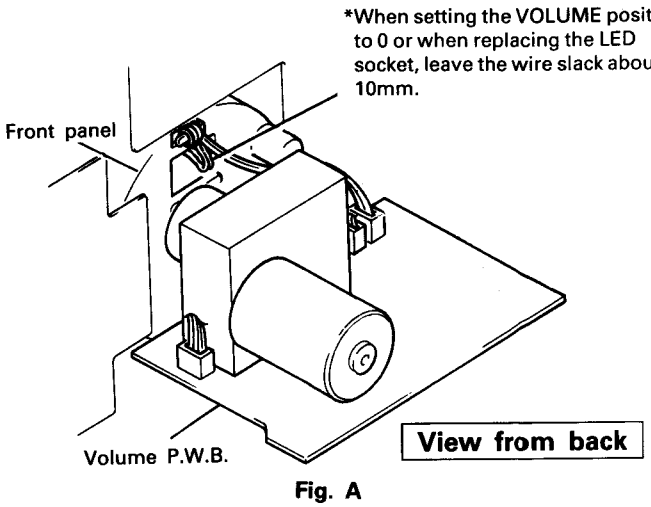

*When setting the VOLUME position to 0 or when replacing the LED socket, leave the wire slack about 10mm.
Front panel
Volume P.W.B.
View from back

Fig. A

4. Display P.W.B. (Fig. 3)

After removing the volume P.W.B., remove 2 screws at ⑥, remove the shield plate, and remove the 9 screws at ⑦ and the 1 fiber washer.

5. Headphones P.W.B. (Fig. 3)

Remove 1 screw at ⑧.

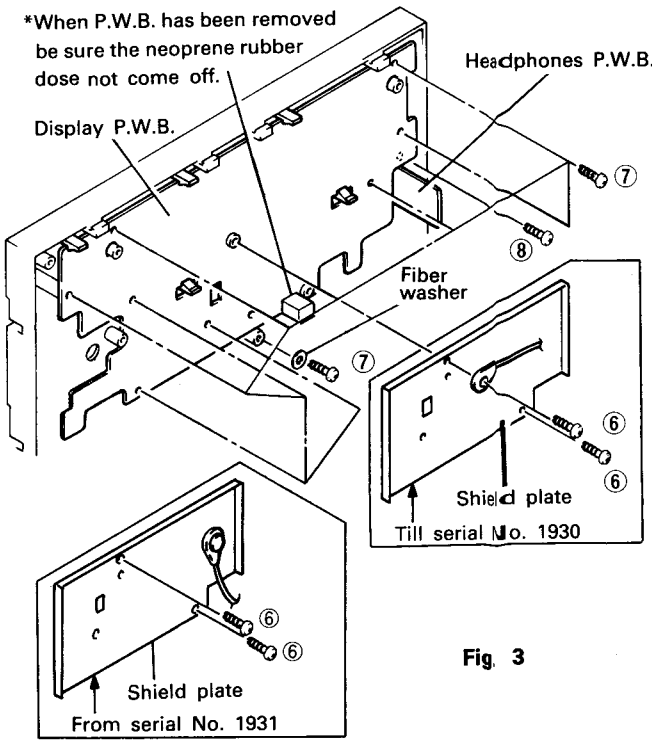


Fig. 3

6. Cassette Chassis (Fig. 2, 4)

Press the eject button and open the cassette door (see Fig. 2). Remove 2 screws at ⑨ and 2 screws at ⑩.

Note: TAPE 2 is removed in the same way, but TAPE 2 is removed after the counter belt has been removed.

7. Switch P.W.B. (Fig. 4)

Remove 2 screws at ⑪ and remove 1 washer.

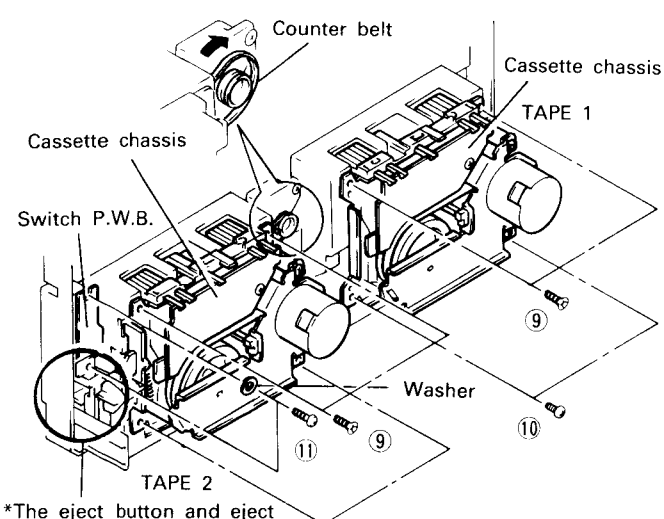


Fig. 4

8. Cassette Door (Fig. 5)

After removing the cassette chassis and then removing 1 screw at Ⓐ and the damper, push each of the two cassette door arms out (in the directions of the arrows) and pull out.
(Both TAPE 1 and TAPE 2 are the same.)

9. Mechanism bracket (Fig. 5)

After removing the cassette doors, remove 3 screws at ⑫.

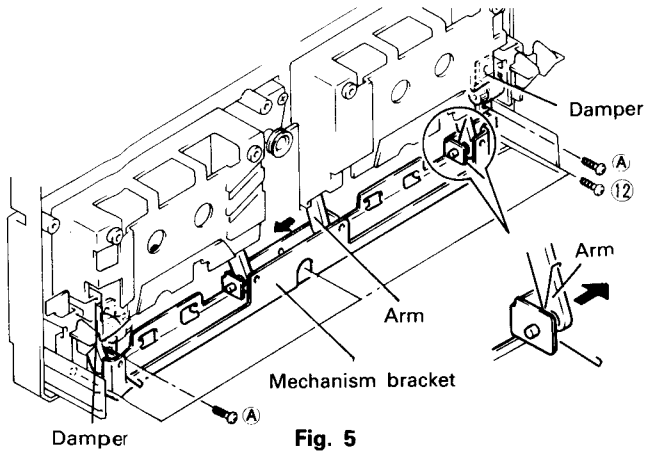


Fig. 5

10. Key Switch P.W.B. (Fig. 6)

After removing the mechanism bracket, remove the 4 screws at ⑬.

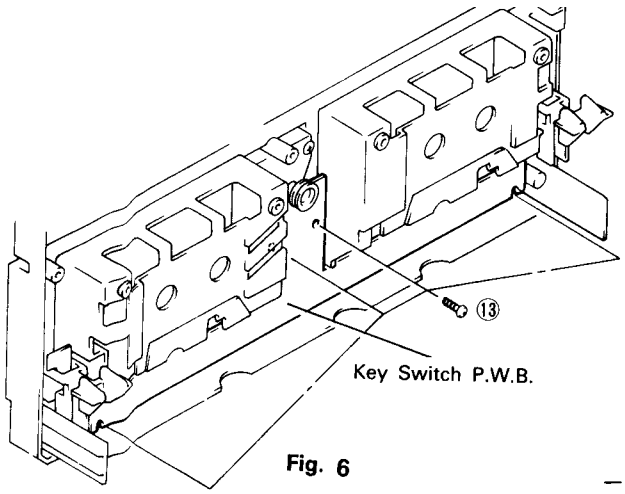


Fig. 6

11. Rear Panel (Fig. 7-1, 7-2)

Remove 7 screws at ⑭, 6 screws at ⑮, 1 screw at ⑯-1 and 1 lock washer.

Note: Carry out tuner unit adjustment with the rear panel removed.

12. Tuner P.W.B. (Fig. 7-2)

Remove 1 screw at ⑯-2 and 1 lock washer and remove the tuner P.W.B. connector Ⓓ (1 place). (For ZS only: Remove 1 screw at ⑯-3 and 1 lock washer.)

13. Main P.W.B. (Fig. 7-2)

Remove 6 screws at ⑰ and remove the main P.W.B. connector Ⓔ (2 places).

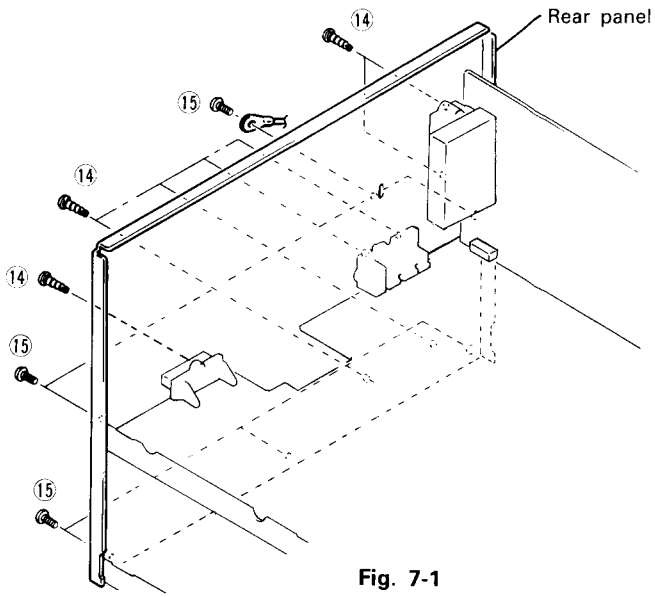


Fig. 7-1

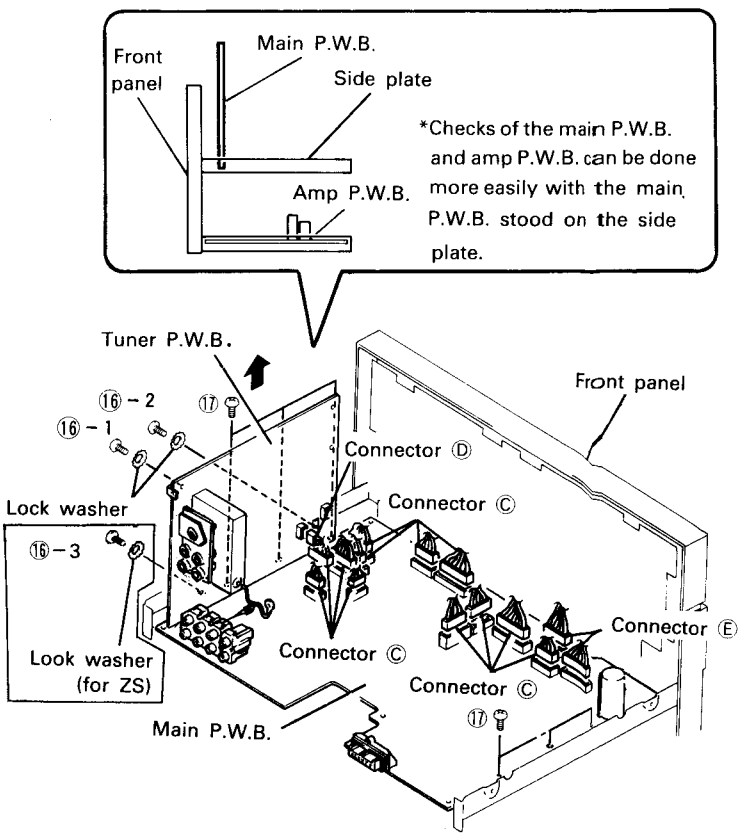


Fig. 7-2

14. Amp P.W.B. (Fig. 8)

Remove 5 screws at ⑱.
(For ZS only: Remove 1 screw at ⑲.)

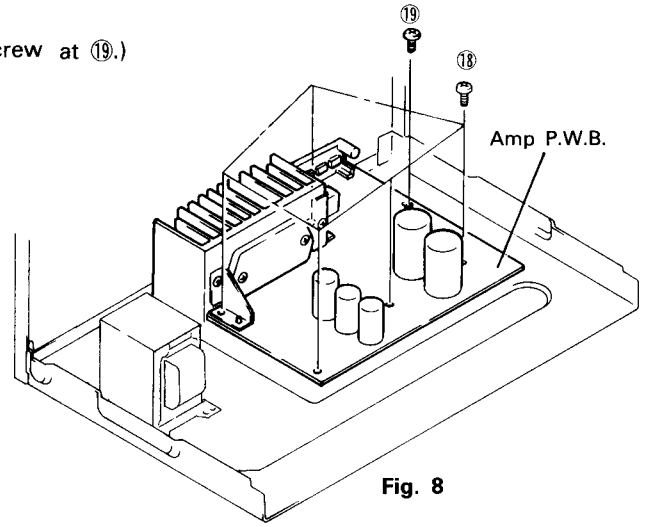


Fig. 8

ADJUSTMENTS

1. TAPE DECK SECTION

● **Adjustment points**

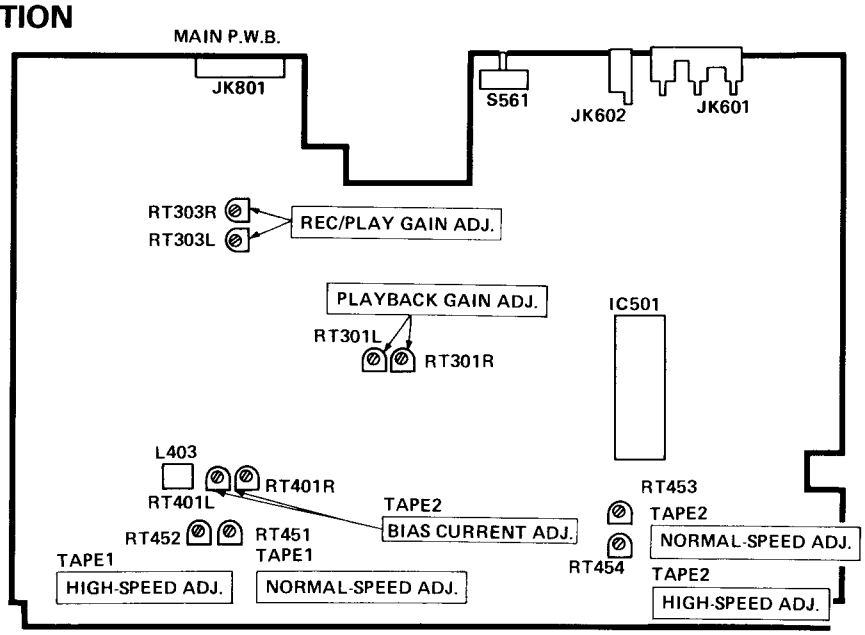


Fig. 9

● **Measuring Instruments**

1. Audio oscillator
2. Electronic Voltmeter
3. Attenuator
4. Frequency counter

● **Jigs, Test and Check Tapes**

1. Head mounting jig
2. 400 Hz, Dolby alignment tape
3. 10 kHz, azimuth alignment tape
4. 3,000 Hz, tape speed alignment tape
5. Mirror tape (for tape running check)
6. NORMAL tape (MAXELL UD I 90)
   CHROME tape (MAXELL UD II 90)
   METAL tape (MAXELL MX46)

● **Positions of Knobs**

Match the positions of switches and knobs to those shown in the table following unless otherwise specified.

Tape running direction	Forward
Dolby NR switch	OFF

Remove the cassette lids and then clean the heads, pressure rollers and capstans using alcohol, then perform adjustment according to the following procedure.

1. Tape Speed Adjustment

Note:1 Always adjust the tape speed in order of (1) to (2). If adjustment is made in reverse order, the High-speed will be change.

Note:2 For Normal-Speed, High-Speed, switchover use the Micro-computer Test Program.

※Micro-computer Test Program

The Micro-computer Test is carried as follows; While depressing the STOP button and the FF button of TAPE 1, insert the power cord into a power-outlet socket. While in PLAY mode, Normal-Speed and High-Speed are varied by pressing the PLAY button. If the power is turned off the Micro-computer Test Program is cancelled.

(1) Normal-speed

Tape	Adjustment value	Adjustment point
Tape speed Alignment tape	3,000 $^{+10}_{-0}$ Hz	RT451 (TAPE 1) RT453 (TAPE 2)

(2) High-speed

Tape	Adjustment value	Adjustment point
Tape speed Alignment tape	6,000 $^{+20}_{-0}$ Hz	RT452 (TAPE 1) RT454 (TAPE 2)

Adjustment Procedure

Connect the frequency counter to the OPTION OUT terminals and apply heat-run for 20 minutes or more. Then, playback the 3,000 Hz tape speed alignment tape in TAPE 1 and TAPE 2 and adjust the tape speed at the middle of the tape.

Note: Speed difference between TAPE 1 and TAPE 2 should be within 1%.

2. Azimuth Adjustment of Record/Playback Head

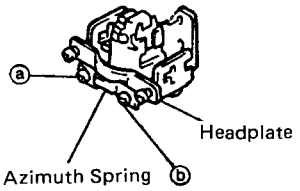
Tape	Adjustment value	Adjustment point
Azimuth alignment tape (10kHz)	Maximum output	Azimuth adjustment screw

Adjustment procedure

Connect the electronic voltmeter to the OPTION OUT terminals and playback the alignment tape in forward and reverse modes. Adjust the screw ⓐ in forward mode and the screw ⓑ in reverse mode.

When the maximum values of the two channels differ, set the maximum values to that of L channel. At this time, ensure that the maximum value difference between the two channels is within 2dB. If the difference is more than 2dB, readjust.

The phase of both channels should be within ±45°. Adjust the phase in forward and reverse modes.



Note: Be sure to stop tightening the screws in the threading direction (because they have backlash).

After this adjustment, record a 10kHz (0dB to 10dB) signal in TAPE 2 forward mode, playback the tape in TAPE 2 reverse mode, and make azimuth adjustment. Then, playback this tape in TAPE 1 forward and reverse modes and make azimuth adjustment. After this, make the same adjustments by reversing TAPE 1 and TAPE 2.

After making the adjustment apply Screw-Lock to the head angle adjustment screw. At this time also be sure to apply Screw-Lock between the Headplate and the Azimuth Spring.

3. Playback Gain Adjustment

Tape	Adjustment value	Adjustment point
Dolby alignment tape (400Hz)	300mV(−8.2dBm)	RT301L,R

Adjustment procedure

Connect the electronic voltmeter to the OPTION OUT terminals, playback the Dolby alignment tape, and adjust RT301L and R until the electronic voltmeter reads the above adjustment value. (Make the adjustment in TAPE 2. In TAPE 1, ensure that the difference is within ±2.5dB.)

4. Bias current Adjustment and REC/PLAY Gain adjustment

Set RT401LR in the center position and record at the recording level shown in the table below to adjust for each tape, then check the playback level.

Order	Tape	Recording level			Playback level		Adjustment procedure
		Frequency (Hz)	Level	Adjustment point	Level	Adjustment point	
1	NORMAL tape	1.5k/12.5k	0dB −20dB	ATT	0dB to 1dB at 12.5kHz compared with that at 1.5kHz	RT401LR	(1)
2	NORMAL tape	400	−16dBm	ATT	Within ±0.5dB	RT303LR	(2)
3	NORMAL tape	1.5k/12.5k	0dB −20dB	ATT	0dB to 1dB at 12.5kHz compared with that at 1.5kHz	Check	(1)
4	CHROME tape	1.5k/12.5k	0dB −20dB	ATT	Within $^{+9}_{-3}$dB	Check	(1)
5	METAL tape	1.5k/12.5k	0dB −20dB	ATT	Within $^{+9}_{-3}$dB	Check	(1)

Adjustment procedure

(1) Bias current adjustment

1) Connect the audio oscillator to the AUX IN terminals via attenuator. In record mode, adjust the audio oscillator until meter reading is 0dB (OPTION OUT terminals output voltage is Dolby reference output voltage). Then, adjust the attenuator to achieve 0dB −20dB. (Frequency: 1.5 kHz)
2) After recording on a tape in this state, set the audio oscillator frequency to 12.5 kHz and then record on the tape.
3) Playback the recorded tape, read the output, and check that the level at 12.5 kHz is 0dB to 1dB greater than at 1.5 kHz.
4) If the level at 12.5 kHz is not 0dB to 1dB greater than at 1.5 kHz, adjust RT401L and R and repeat record/playback until the output difference of 0dB to 1dB is obtained.

Note: For CHROME and METAL tapes, make checks only. If $\pm\frac{9}{3}$dB is not satisfied, readjust using a NORMAL tape.

(2) Record/playback gain adjustment

1) Connect the audio oscillator to the AUX IN terminals and apply 400 Hz signal. In record mode, adjust the audio oscillator until the meter reads −16dBm, and then record on the tape in TAPE 2.
2) Playback the recorded tape in TAPE 2 and check that the output is within −16dBm±0.5dB.
3) If the output difference is not within ±0.5dB, adjust RT303L and R and repeat record/playback until the difference is ±0.5dB.

5. Cassette Chassis Inspection and Adjustment

No.	Inspection item	Reference value
1	Playback torque	35 to 75g·cm
2	FF/REW torque	85 to 170g·cm
3	Tape drive force	Over 120g
4	Supply back-tension	2.0 to 6.0g·cm

2. FM, AM TUNER SECTION

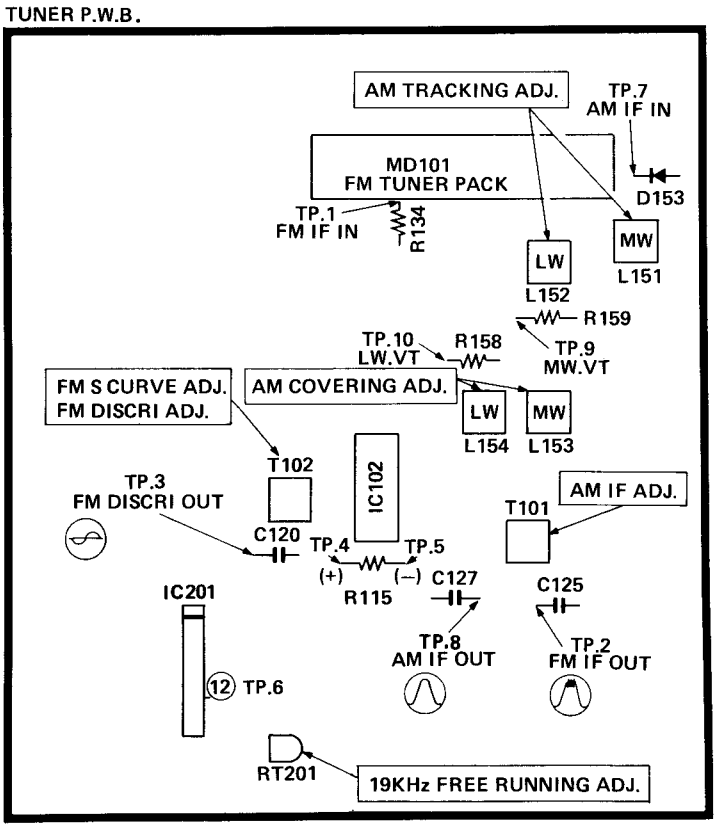


Fig. 10

(1) FM section

Sweep Generator　Sweep Generator　Oscilloscope　+DC Null Meter

VTVM　Frequency Counter　Dist. Distortion Meter

Condition Function: FM Volume: Min. FM mode: MONO

Sequence		Connection		Setting		Adjust for	
		Input	Output	Tuning	Signal	Adjust	Indication
1	"S" curve	Output TP.1 0.1 μ 100K	Input TP.3 100K 0.1 μ	—	10.7 MHz	T102	(Note 2)
2	Discriminator	ANT. Terminal 75 ohms 1 kHz 40K(dev.)	TP.4 R115 (+) (−) TP.5	89.9 MHz	89.9 MHz	T102	0 ± 30 mV (Note 3)
3	19 kHz Free running	ANT. Terminal 75 ohms, 60 dBμ Non modulation	TP.6 100K	89.9 MHz	89.9 MHz	RT201	19 kHz ± 50 Hz

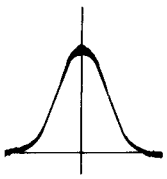


Fig. 11

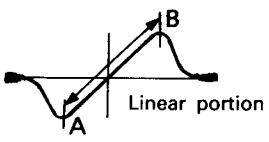


Fig. 12

(Note 1)
Perform adjustment at least 3 minutes after the power has been switched on.

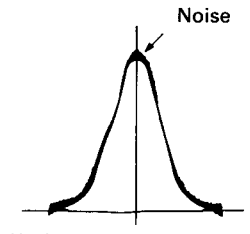
(Note 2)
Adjust T102 to observe the "S" curve and adjust T102 to make the "S" curve linear, as shown in Fig. 12.

(Note 3)
Connect the DC Null meter to TP.4, TP.5, and adjust T102 so that the meter reads 0 ± 30 mV.

(2) AM section

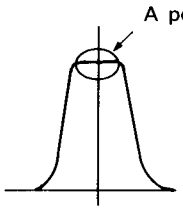
Condition
Function: AM
Modulation: 400 Hz 30%

	Sequence	Connection		Setting		Adjust for	
		Input	Output	Tuning	Signal	Adjust	Indication
1	IF Amp.	Output TP.7 0.1 μ 10K	Input TP.8 10K 0.1 μ	—	450 kHz	T101	(Note 4)
2	Covering (Note 5)	Loop antenna	TP.9 (+) (−)	(MW) 522 kHz	—	L153	1.2 ± 0.05V (Note 6)
			TP.10 (+) (−)	(LW) 153 kHz		L154	
3	Tracking		OPTION OUT Terminal	(MW) 603 kHz	(MW) 603 kHz	(MW) L151	Max. output (Note 7)
				(LW) 164 kHz	(LW) 164 kHz	(LW) L152	



Weak signal input waveform

Fig. 13



Strong signal input waveform

Fig. 14

(Note 4)
Adjust T101 so that the waveform shown in Fig. 13 is obtained. After adjustment, increase the sweep generator output and adjust so that portion A of the waveform shown in Fig. 14 is flat.

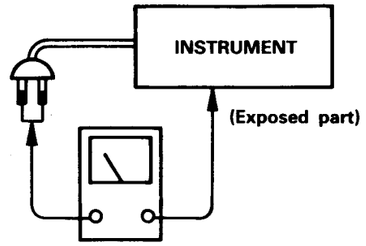
(Note 5)
The L153 and L154 are factory preset. If it is touched erroneously, perform this procedure.

(Note 6)
Connect the DC Null meter to TP.9, TP.10 and adjust L153, L154 so that the meter reading is 1.2 ± 0.05V.

(Note 7)
At the beginning of the adjustment (rough adjustment), set the input to 74 dB/m. As adjustment proceeds, decrease the input to minimum.

Check that exposed parts are acceptably insulated from the supply circuit before returning the instrument repaired to the customer.

- **Checking method**
  Operate switch is set to ON.
  Next, measure the resistance value between the both poles of attachment cup (Power supply plug) and the exposed parts (Parts such as Knob, Cover, etc. where the customer is easy to touch.) and check that the resistance value is 500 kohms or more.



Insulation tester (DC 500V)

MEMORY BACK UP

Even when the power cord is disconnected, the preset stations are retained for a few days by a capacitor back-up system.
However, if power is not supplied to the unit for a long time, the stations are sometimes erased.
If this happens, preset the stations again.

LUBRICATION

Apply one or two drops of pan motor oil or sonic slider oil to rotating parts. Coat sliding parts with Molycoat (EL-10M). Lubricate once a year or every 1000 hours of operation. Do not let oil contact belts or idlers.

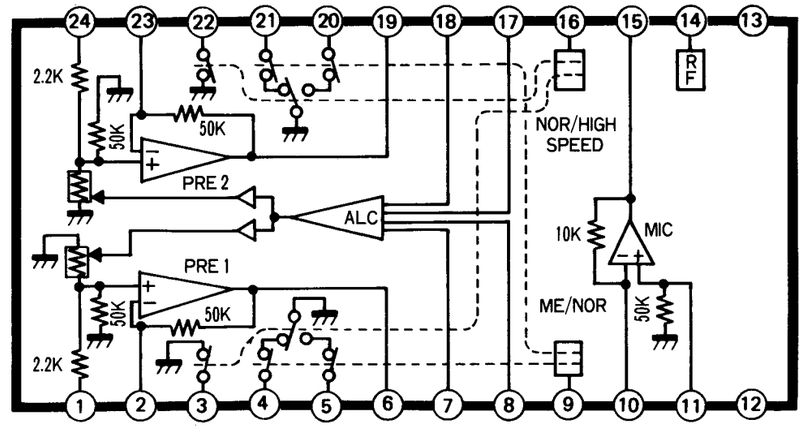
Rotating parts	Metal to metal	Pan motor oil (10W-40)
	Plastics to metal	Sonic slider oil (#1600)
Sliding parts	Plastics to plastics Plastics to metal	Molycoat (EL-10M)
Spring vibration prevention		Floyl (GB-TS-1)

MAINTENANCE

■ **Clean cabinet and panels when dirty**
Clean off dirt on the surfaces with a dry cloth. Never use thinners, benzene or alcohol since these will damage the surface finish.

EXPLANATION OF NEW PARTS

IC307 LA3240 (REC Amp)



*Switching inputs ⑨ and ⑯ indicate switch positions at input level "L".
Also, 1/2 x (Vcc-0.9) is the "H" and "L" switching level for all input terminals.

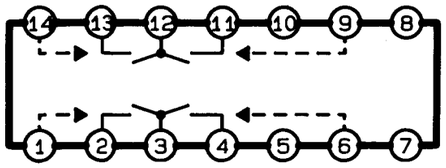
Maximum Rating (Ta=25°C)

Item	Symbol	Rating
Maximum voltage	Vcc max	16V
Permissible power consumption	Pdmax	720 mW
Operating temperature	Topg	−20 to +75°C
Storage temperature	Tstg	−40 to +125°C

Terminal Function Table

Pin No.	Function Name	Pin No.	Function Name
1	IN 1	13	Vcc
2	NF 1	14	R.F.C.
3	N/H OUT 1	15	MIC OUT
4	Me/Nor OUT 1-1	16	Nor/High SW
5	Me/Nor OUT 1-2	17	ALC CONT.
6	OUT 1	18	ALC IN 2
7	ALC IN 1	19	OUT 2
8	ALC	20	Me/Nor OUT 2-2
9	Me/Nor SW	21	Me/Nor OUT 2-1
10	MIC NF	22	NH/OUT 2
11	MIC IN	23	NF 2
12	GND	24	IN 2

IC302 μPC1290C (Head Switching)



Absolute Maximum Ratings (Ta=25°C unless otherwise specified)

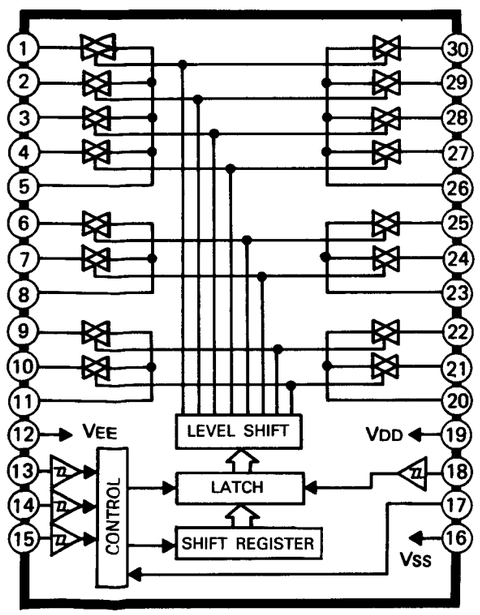
Item	Symbol	Condition	Rating
Maximum voltage	Vcc		16V
Package permissible loss	Pd	Ta=70°C	400mW
Operating temperature	Topt		−20 to +70°C
Storage temperature	Tstg		−40 to +125°C

Terminal Function Table

Pin No.	Function Name	Pin No.	Function Name
1	IN_{R1}	8	Vcc_2
2	SW_{R1}	9	IN_{P2}
3	GND	10	GND
4	SW_{P1}	11	SW_{P2}
5	GND	12	GND
6	IN_{P1}	13	SW_{R2}
7	Vcc_1	14	IN_{R2}

Terminal ①, ⑥, ⑨, ⑭:
Switch ON at Hi level (2.5 V or more)
Switch OFF at Lo level (1.5 V or less)

IC602 LC7821 (Function Switching)



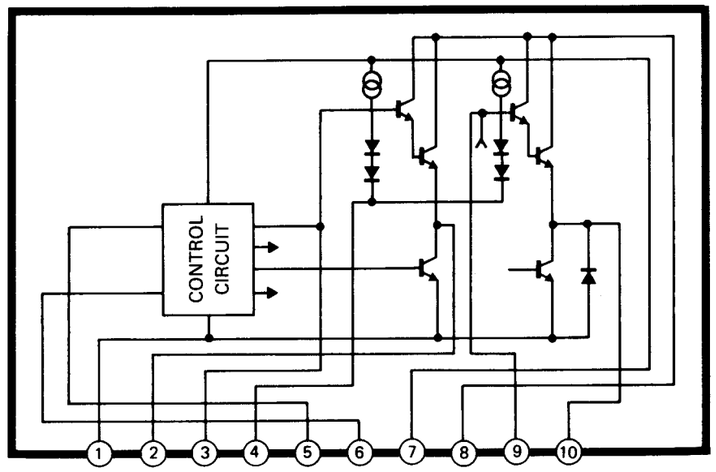
Absolute Maximum Ratings/Ta=25°C

Item	Symbol	Condition	Rating
Maximum voltage	V_{DD} max	V_{DD}	−3.0 to +20V
	V_{EE} max	V_{EE}	−20 to +0.3V
Permissible power consumption	Pd max	Ta≦75°C	100mW
Operating temperature	Topg		−30 to +75°C
Storage temperature	Tstg		−40 to +125°C

Terminal Function Table

Pin No.	Function Name	Function	Pin No.	Function Name	Function
1	L1	Analog switch input/output terminal	17	S	Setting the select terminal to "L" or "H alters the address as follows:
2	L2				S terminal: L / H; Address A0: 0 / 1; A1: 1 / 1; A2: 0 / 0; A3: 1 / 1
3	L3				
4	L4				
6	L5		18	$\overline{RES}$	Reset terminal. When the power is turned on the analog switches are not set; by setting this switch to "L", however, all analog switches go OFF.
7	L6				
9	L7		20	RCOM3	Analog switch input/output terminal
10	L8		23	RCOM2	
5	LCOM1		26	RCOM1	
8	LCOM2		21	R8	
11	LCOM3		22	R7	
12	V_{EE}	Power terminal	24	R6	
16	V_{SS}		25	R5	
19	V_{DD}		27	R4	
13	CE	Serial data input terminal	28	R3	
14	DI	CE·····chip enable terminal DI·····data input terminal	29	R2	
15	CL	CL·····clock input terminal	30	R1	

IC606 BA6209N (Volume Motor Control)



Input/Output Relation Table

Fin	Rin	OUT1	OUT2
L	L	L	L
H	L	H	L
L	H	L	H
H	H	L	L

Input Level "H"·····2 V or more
Input Level "L"·····0.7 V or less

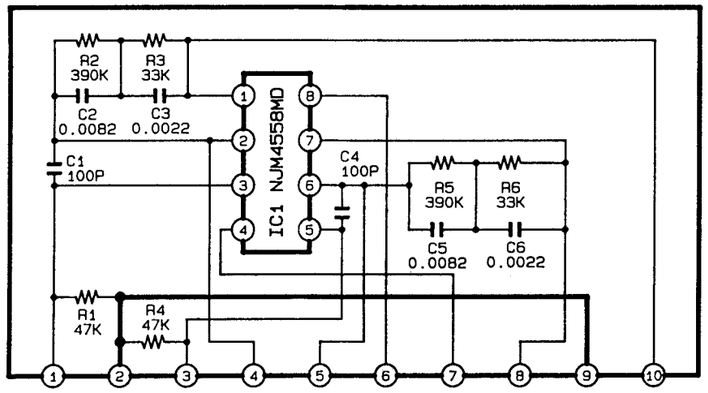
Absolute Maximum Rating (Ta=25°C)

Item	Symbol	Rating
Impressed voltage	Vcc1 Vcc2	18V
Permissible loss	Pd	1000mW
Operating temperature	Topr	−25 to +75°C
Storage temperature	Tstg	−55 to +125°C

Terminal Function Table

Pin No.	Function Name	Pin No.	Function Name
1	GND	6	Rin
2	OUT 1	7	Vcc 1
3	Vz 1	8	Vcc 2
4	V_R	9	Vz2
5	Fin	10	OUT 2

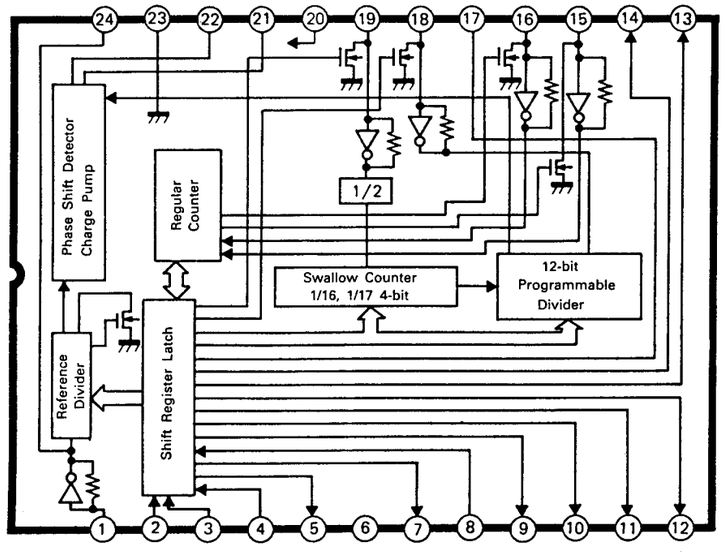
M601 TM1060 (Equalizer AMP)



Terminal Function Table

Pin No	Function Name	Pin No.	Function Name
1	R INPUT	6	+B
2	GND	7	−B
3	L INPUT	8	L OUTPUT
4	R.NF	9	GND
5	L.NF	10	R OUTPUT

IC251 LC7217 (Electronic Tuning PLL Frequency Synthesizer)



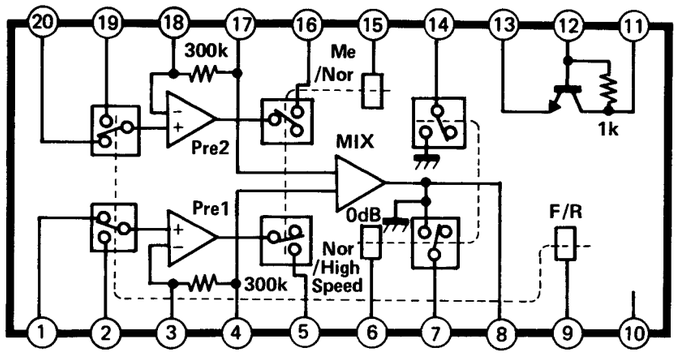
Maximum Rating (Ta=25°C, Vss=OV)

Item	Symbol	Condition	Rating
Supply voltage	V_{DD}		−0.3 to +7.0V
Permissible power consumption	Pd max	Ta≦85°C	350mW
Operating temperature	Topg		−40 to +85°C
Storage temperature	Tstg		−55 to +125°C

Individual Terminal Specefications

Pin No.	Function Name	Function
1 24	XIN XOUT	• Crystal oscillator Connection (7.2 MHz).
2	CE	• This terminal sets to High level at time of serial data input (DI) to LC7217 and serial data output (DO).
3	DI	• Input terminal for serial data transferred from the controller to LC7217. • It is necessary to input a total 36-bit datum in order to set to initial condition.
4	CL	• A clock that synchronizes data at time of serial data input (DI) to LC7217 and serial data output (DO).
5	DO	• Output terminal for the serial data transferred from LC7217 to the controller. (Not used.)
6	$\overline{SYC}$	• Controller clock output terminal; 400 kHZ (duty 66%) is output upon current introduction and thereafter. (Not used.)
7 8	IN0 IN1	• Content of input ports IN0 and IN1 is converted from parallel to serial and can be output from output terminal DO.
9 10 11 12 13 14 17	$\overline{OUT0}$ $\overline{OUT1}$ $\overline{OUT2}$ $\overline{OUT3}$ $\overline{OUT4}$ $\overline{OUT5}$ $\overline{OUT6}$	$\overline{MONO}$ Not used Not used Not used $\overline{LW}$ $\overline{MW}$ $\overline{FM}$ • Latches onto 0_0-0_6 serial data transferred from the controller, reverses the data and outputs it in parallel. • $\overline{OUT1}$ and $\overline{OUT2}$ are complentary outputs. • $\overline{OUT0}$, $\overline{OUT3}$, $\overline{OUT4}$, $\overline{OUT5}$ and $\overline{OUT6}$ are N-ch open drain outputs (dielectric strength 13V). ($\overline{OUT1}$, $\overline{OUT2}$, $\overline{OUT3}$ are not used.)
15	LCTR	• Serial data input: LCTR is selected if SC is set to 0. (Not used. Connected to GND.)
16	HCTR	• Serial data input: HCTR is selected if SC is set to 1. (Not used. Connected to GND.)
18	AMIN	• Serial data input: AMIN is selected if DV is set to 0. • Serial data input: When SP is set to 1. • Input frequency is 2-40 MHz (125mVrms min). • Signal is transmitted to the swallow counter without passing through the built-in pre-scaler (1/2). • Sec. divideng cycle is 256-65,536; actual dividing cycle is as per set value. • Serial data input: When SP is set to 0. • Input frequency is 0.5-10 MHz (125mVrms min). • Signal is transmitted directly to the 12-bit programmable divider. • Sec. dividing cycle is 4-4096; actual dividing cycle is as per set value.
19	FMIN	• Serial data input: FMIN is selected if DV is set to 1. • Input frequency is 10-130 MHz (125mVrms min). • Signal is transmitted to the swallow counter through the built- in pre-scaler (1/2). • The set dividing cycle is 256-65,536 but because there is a built-in pre-scaler (1/2 actual dividing cycle is 2 times set value.
20	VDD	• LC7217 power terminal. It supplies 4.5-6.5 V during PLL operation. • Operates the crystal oscillator circuit only; can be lowered to 3.5 V in case the controller clock and timer time base are gotten.
21 22	PD1 PD2	• PLL charge pump output terminal. In case the frequency obtained by N-division of local oscillator signal frequency is higher than the standard frequency, High level is output from PD1 and PD2; if lower than the standard frequency, Low level is output from PD1 and PD2. In case N-divided frequency matches standard frequency, the unit goes into floating condition.
23	VSS	• LC7217 ground terminal.

IC303 LA3246 (Playback Amp)



Switching inputs ⑤, ⑯, ⑦ and ⑭ indicate input level switch positions. Also, as for individual input terminals, 1/2 x (Vcc 0.9) is the "H" or "L" level switching level.

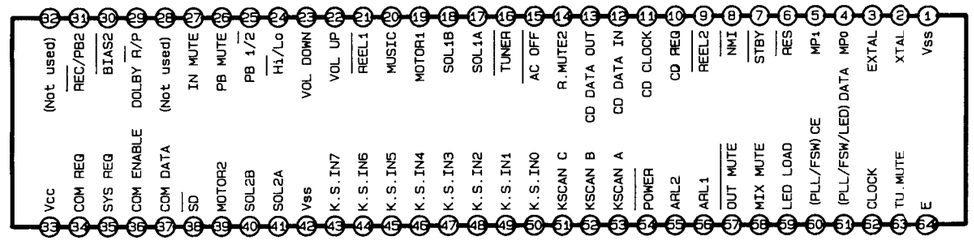
Maximun Ratings/Ta=25°C

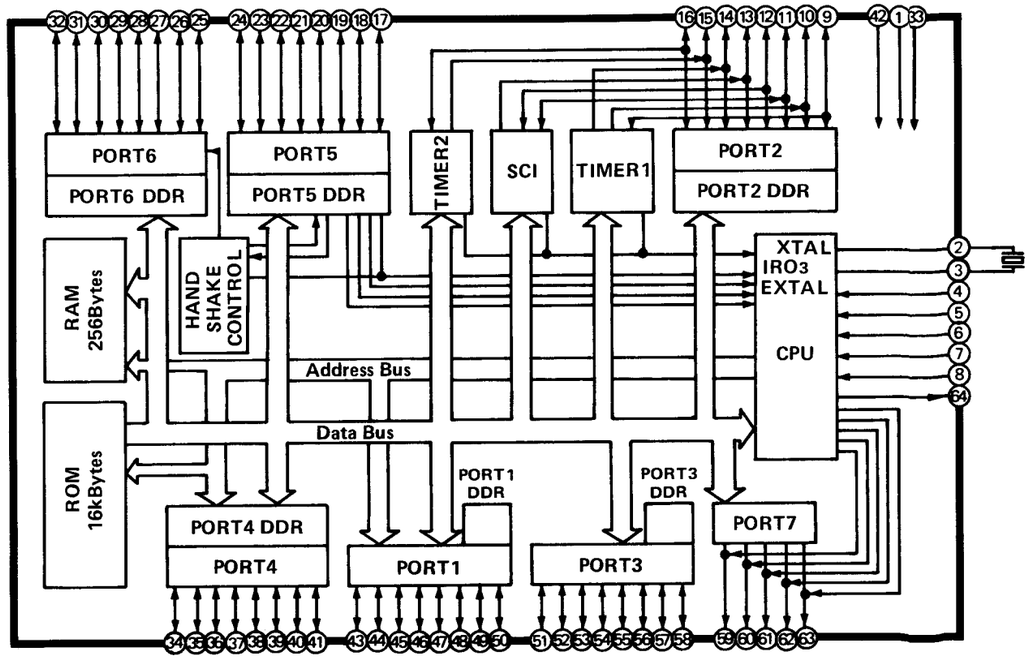
Item	Symbol	Condition	Rating
Maximum voltage	V_{CC} max		16V
Permissible power consumption	Pd max	Ta=25°C	500mW
Operating temperature	Topg		−20 to +75°C
Storage temperature	Tstg		−40 to +125°C

Terminal Function Table

Pin No.	Function Name	Pin No.	Function Name
1	IN_{1F}	11	V_{CC}
2	IN_{1R}	12	RFC
3	NF 1	13	Filter OUT
4	OUT 1	14	N/H OUT 2
5	Me/Nor OUT 1	15	Me/Nor SW
6	Nor/High SW	16	Me/Nor OUT 2
7	N/H OUT 1	17	OUT 2
8	MIX OUT	18	NF 2
9	F/R SW	19	IN 2R
10	GND	20	IN 2F

IC501 HD63A01Y0C43P (System Control Microcomputer)





Individual Terminal Functions

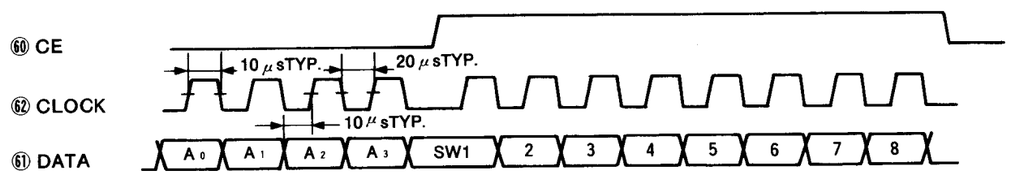
Pin No.	Port Name	Function Name	Function
1	Vss	←	Power. Connect to GND.
2 3	XTAL EXTAL	← ←	Oscillator connection Terminal and external clock connection terminal.
4 5	MP0 MP1	← ←	Enhancement operation mode selection terminal (input). Select signal chip mode on this unit (connect both terminals to Vcc).
6	$\overline{RES}$	←	Reset input. "L" is reset, "H" is normal operation.
7	$\overline{STBY}$	←	Standby control input. Oscillation stops at "L" Independent of software.
8	$\overline{NMI}$	←	Non-maskable interrupt input. Not used on this unit so connect to Vcc.
9	P20	$\overline{REEL\ 2}$	Tape 2 reel pulse input. Detected as Hi → (falls back to) Lo.
10 11 12 13	P21 P22/SCLK P23/SIN P24/SOUT	CD REQ CD CLOCK CD DATA IN CD DATA OUT	Communications request output. Clock input Data (status) input Data (command) output } CD communications port. Serial input/output port are used.
14	P25	R.MUTE2	Tape 2 REC Mute output (REC Mute ON at Hi)
15	P26	$\overline{AC\ OFF}$	AC OFF detection. AC OFF operation at Low level.
16	P27	$\overline{TUNER}$	"L" at Tuner selection time. Outputs "H" otherwise.
17	P50	SOL1A	Tape 1 SOL A (solenoid A) output (SOL A ON at Hi).
18	P51	SOL1B	Tape 1 SOL B (solenoid B) output (SOL B ON at Hi).
19	P52	MOTOR1	Tape 1 motor output (motor ON at Hi).
20	P53	MUSIC	Tape 1/2 music detection input Not used on this unit so connect nothing except pull-up resistor.
21	P54	$\overline{REEL\ 1}$	Tape 1 reel pulse input. Detected as Hi: → (Falls back to) Lo.
22	P55	VOL UP	Volume control output Hi: Volume up Lo: All other
23	P56	VOL DOWN	Volume control output Hi: Volume down Lo: All other
24	P57	$\overline{Hi}$/Lo	Tape 1/2 motor High/Low speed control output Hi: Low speed Lo: High speed
25	P60	PB1/$\overline{2}$	Tape PB Amp control output Hi: Tape 1 Lo: Tape 2
26	P61	PB MUTE	Tape PB MUTE Output Hi: Mute ON
27	P62	IN MUTE	Tape Line In Mute output Hi: Mute ON
28	P63	—	Not used. Connect nothing.
29	P64	DOLBY $\overline{R}$/P	Tape Dolby R/P switching output Hi: PB Lo: REC
30	P65	$\overline{BIAS2}$	Tape 2 Bias ON/OFF output Hi: Bias OFF Lo: Bias ON
31	P66	$\overline{REC}$/PB2	Tape 2 R/P Head switching output Hi: PB Lo: REC
32	P67	—	Not used. Connect nothing.
33	Vcc	←	Power. Connect to +5V, or Vcc.
34 35 36 37	P47 P46 P45 P44	COM REQ SYS REQ COM ENABLE COM DATA	Communications request input Communications request output Communications Enable input/output Data input/output } Communications port for communication micro-computer IC901.
38	P43	$\overline{SD}$	Tuner signal detection input. Locked when "L"; indicator lights up.
39	P42	MOTOR2	Tape 2 motor output Hi: motor ON Lo: Motor OFF

Pin No.	Port Name	Function Name	Function
40	P41	SOL2B	Tape 2 SOL B output Hi: SOL B ON Lo: SOL B OFF
41	P40	SOL2A	Tape 2 SOL A output Hi: SOL A ON Lo: SOL A OFF
42	Vss	←	Power. Connect to GND
43 44 45 46 47 48 49 50	P17 P16 P15 P14 P13 P12 P11 P10	K. S. IN 7 K. S. IN 6 K. S. IN 5 K. S. IN 4 K. S. IN 3 K. S. IN 2 K. S. IN 1 K. S. IN 0	Key scan input; place a matrix between Q0~Q6 terminals of IC502.
51 52 53	P37 P36 P35	KSCAN C KSCAN B KSCAN A	Key scan output.
54	P34	$\overline{POWER}$	Power ON/OFF output Hi: Power OFF Lo: Power ON
55 56	P33 P32	ARL2 ARL1	ARL output Level 1: ARL 1 Lo, ARL 2 Lo Level 2: ARL 1 Lo, ARL 2 Lo Level 3: ARL 1 Lo, ARL 2 Hi Level 4: ARL 1 Hi, ARL 2 Hi
57	P31	$\overline{OUT\ MUTE}$	Tape Line Out Mute output Hi: Mute OFF Lo: Power ON
58	P30	MIX MUTE	Mic Mixing Mute output Hi: Mute ON Lo: Mute OFF
59	P74	LED LOAD	LED Driver (MSM58371) data latch output.
60	P73	(PLL/FSW)CE	PLL IC/Function switch IC/REC Selector IC data latch output.
61	P72	(PLL/FSW/LED) DATA	LED Driver IC/PLL IC/Function switch IC/REC Selector IC; Data output.
62	P71	CLOCK	LED Driver IC/PLL IC/Function switch IC/REC Selector IC; Clock output.
63	P70	TU MUTE	Tuner Mute Output Hi: Mute ON Lo: Mute OFF
64	E	←	E clock. Not used on this unit. Connect nothing

Pins ㉞~㊲ are the communications line to IC901. As for IC901: Note for Pin⑲ SYSSEL terminal handing; it is connected to Pin ㊹ SO0 terminal. If this connection is not made correctly the communications line will appear to malfunction and the set will not function at all, so pay attention to this connection.

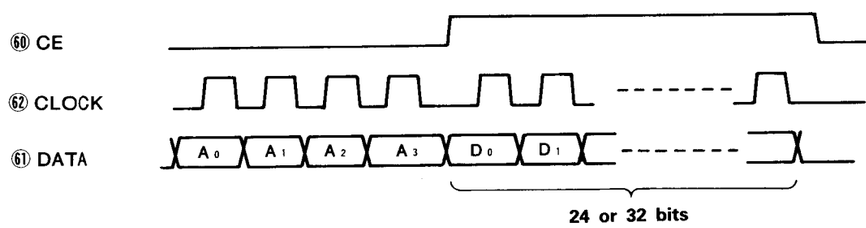
Pins ㊶~㊸ key scan output drives IC502 (TC4028BP). This signal is decoded at IC502 and the actual scan signal is produced at terminals Q0~Q6. Q0~Q5 scan the deck-related operation buttons while Q6 scans the circuit that selects the initial condition.

Data Transmission to IC602 (LC7821)



Pins ⑥① and ⑥② are a common line that controls IC602, IC251 and IC503; they provide the respective serial control data and clock signals. Pin ⑥⓪ is a common line that controls IC602 and IC251; it provides the boundary for the address signals that indicate which IC to choose as well as the signals that distinguish data input time periods.

Data Transmission to IC251 (LC7217)

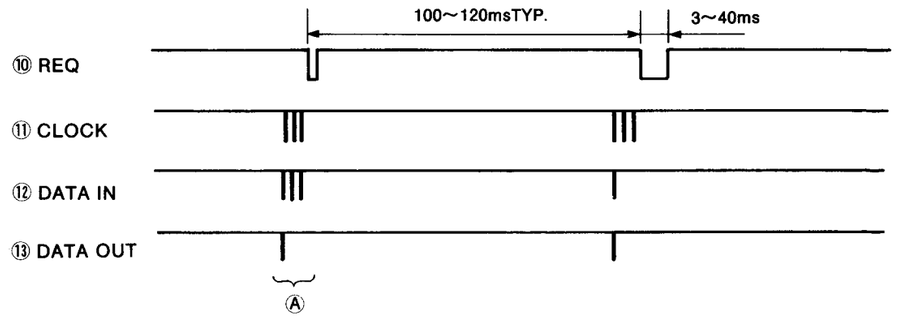


The method of transmitting data to IC251 is practically the same as that for IC602; only the data length is different. Pins ⑨~⑭ of IC251 and also Pin ⑰ $\overline{OUT0}$ ~ $\overline{OUT6}$ control and tuner circuit switching are carried out by means of this data, and its contents are given in the table below.

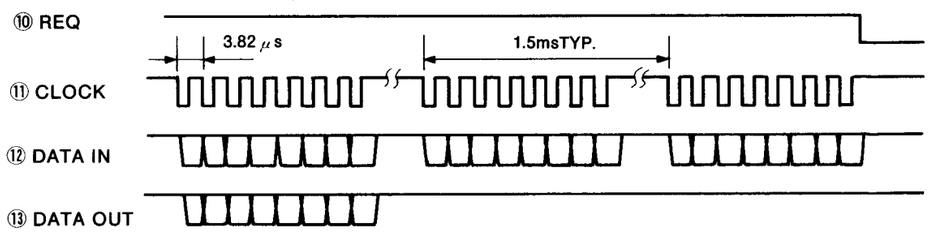
IC251 $\overline{OUT0}$-$\overline{OUT6}$ OUTPUT

Port Name	Function Name	Function	
$\overline{OUT0}$	$\overline{MONO}$	Mono (LW/AM is normal): 0_0 = "1"; Auto: 0_0 = "0"	
$\overline{OUT4}$	$\overline{LW}$	LW available	When LW: 0_4 = "1"; other than LW: 0_4 = "0"
		No LW	doesn't matter
$\overline{OUT5}$	$\overline{MW}$	MW	When MW: 0_5 = "1"; other than MW: 0_5 = "0"
$\overline{OUT6}$	$\overline{FM}$	When FM: 0_6 = "1"; other than FM: 0_6 = "0"	

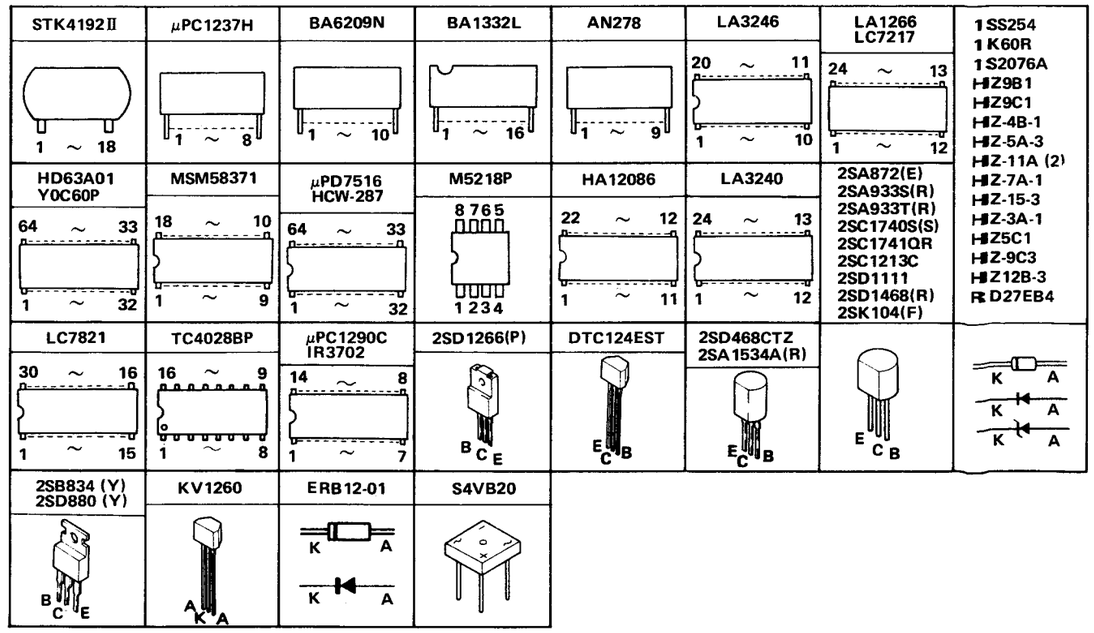
Communications with CD Player (DA-58)



(Ⓐ Unit Enlargement)

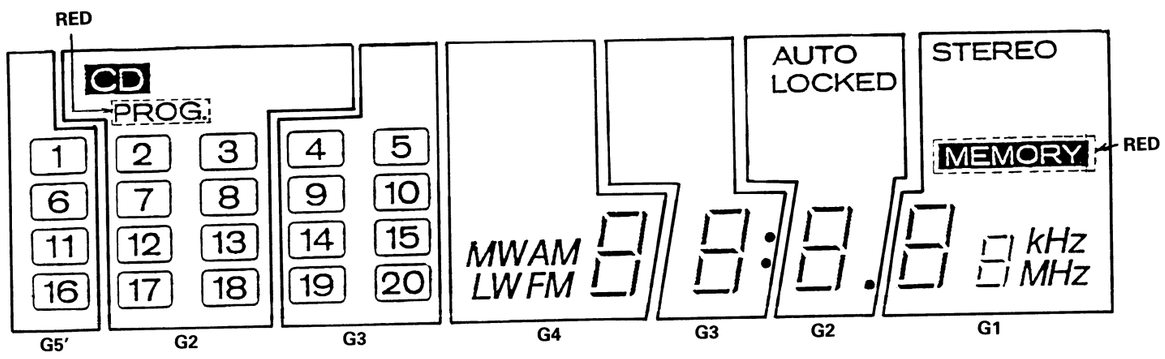


The deck receiver is always in communication with the CD player and a pulse appears at Pins ⑩ and ⑪. A CD status (condition) signal is input at Pin ⑫ Data In. When any change occurs on the CD side (for example PLAY → STOP etc.) a pulse appears, but normally this is "H". Pin ⑬ Data Out is command output; a pulse is output by remote control command or commands due to system operation (such as extended play or CD direct recording). Otherwise, "H" is output by a NOP command. ⑩ REQ provides the output that informs the CD of the communications enable time period. if it is functioning normally, the level is "L" and the clock from the CD does not return.



Display Tube (FIP12BCM7)

1. Fluorescent display tube(FL901) indications



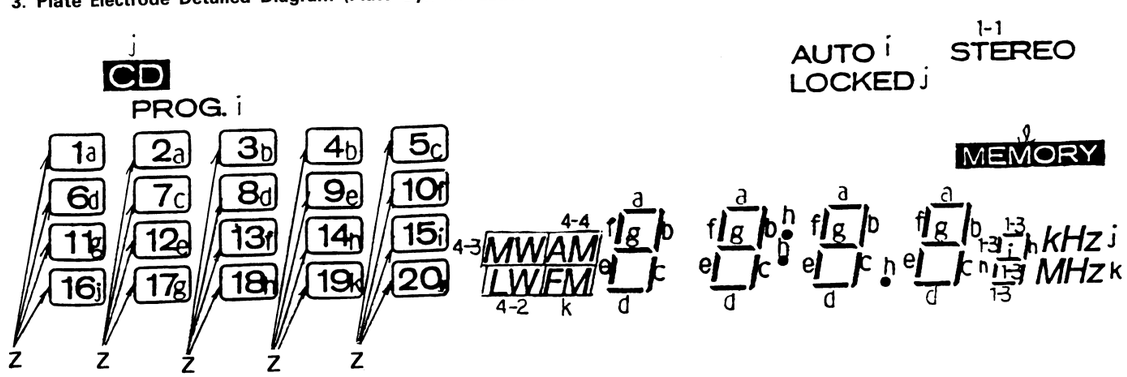
No colored indication is green

2. Electrode Connection

Terminal Number	1	2	3	4	5	6	7	8	9	10	11	12	13
Electrode Connection	F	F	P5-1	G5'	P5-2	P5-3	Ph	Pg	G6	Pf	Pe	Pd	Pc
Terminal Number	14	15	16	17	18	19	20	21	22	23	24	25	26
Electrode Connection	G5	Pb	Pa	NP	NP	Pl	Pk	Pj	G4	Pi	NP	NP	G3
Terminal Number	27	28	29	30	31	32	33	34	35	36	37	38	39
Electrode Connection	NP	NP	G2	P4-1	P4-2	P4-3	P4-4	P1-3	G1	P1-2	P1-1	P_2	F
Terminal Number	40												
Electrode Connection	F												

P: Anode G: Grid F: Filament NP: No Pin

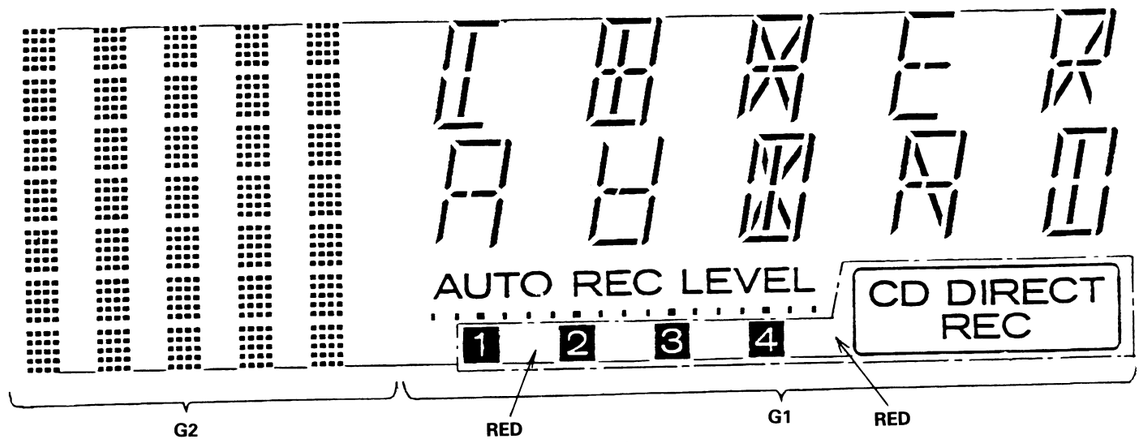
3. Plate Electrode Detailed Diagram (Plate Symbol abbreviated as P)



Note: G5' and G5 must be connected externally of the fluorescent display, e.g. P.W.B.

Display Tube (FIP6AMW19)

1. Fluorescent display tube(FL902) indications



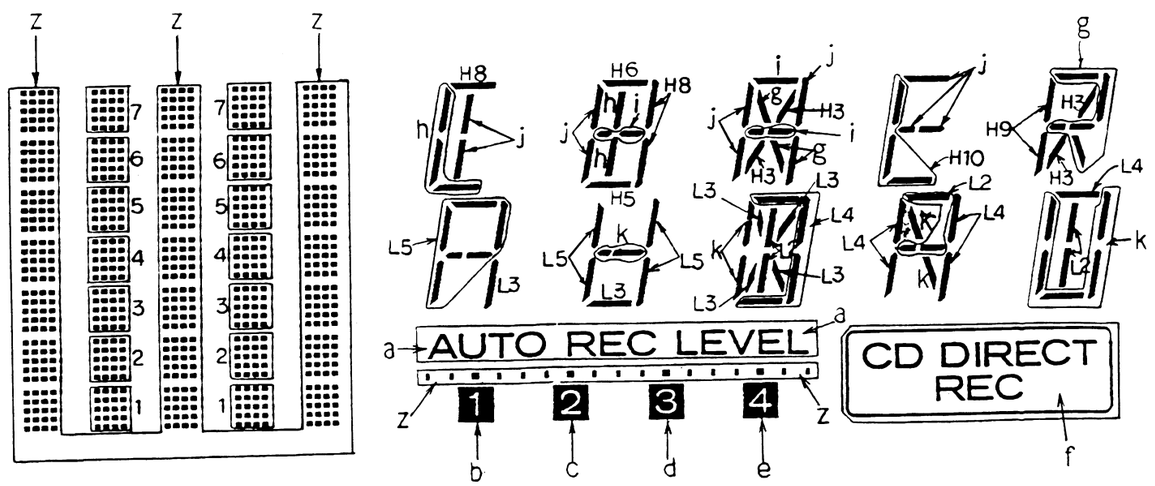
No colored indication is green

2. Electrode Connection

Terminal Number	1	2	3	4	5	6	7	8	9	10	11	12	13
Electrode Connection	F	F	P1	P2	P3	G2	P4	P5	P6	P7	P.H8	G2	P.H5
Terminal Number	14	15	16	17	18	19	20	21	22	23	24	25	26
Electrode Connection	P.L5	G1	P.H9	P.L2	P.H10	P.H3	P.H6	P.L3	P.L4	G1	Pi	Pj	Pk
Terminal Number	27	28	29	30	31	32	33	34	35	36	37	38	39
Electrode Connection	Pa	Pb	Pc	Pd	Pe	G1	Pf	Pg	Ph	NP	Pz	F	F

P: Anode G: Grid NP: No Pin

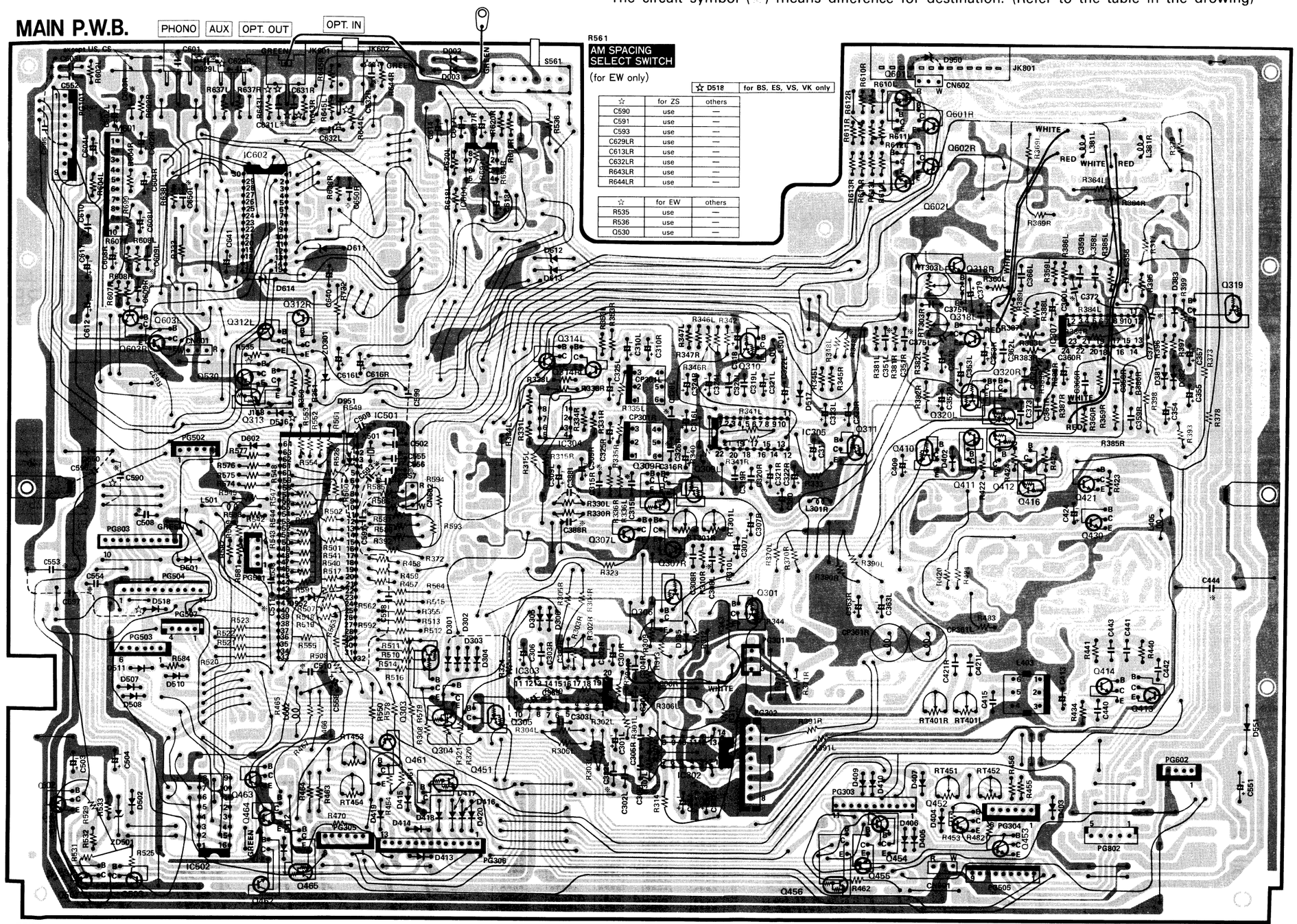
3. Plate Electrode Detailed Diagram (Plate Symbol abbreviated as P)



PRINTED WIRING BOARD [■ : Earth , ▨ : Others]

※ : Axial lead cylindrical ceramic capacitor.
The circuit symbol (※) means difference for destination. (Refer to the table in the drowing)

MAIN P.W.B.



PRINTED WIRING BOARD

〔 ■ : Earth , ▨ : Others 〕

※ : Axial lead cylindrical ceramic capacitor.

The circuit symbol (☆) means difference for destination. (Refer to the table in the drowing)

(LW: VS, BS, ES, VK only)

☆	LW	others
Q151	use	—
Q152	use	—
Q253	use	—
Q254	use	—
Q256	use	—
Q257	use	—
D152	use	—
D155	use	—
D156	use	—
D157	use	—
D158	use	—
D159	use	—
R152	use	—
R154	use	—
R155	use	—
R156	use	—
R157	use	—
R158	use	—
R255	use	—
R256	use	—
R257	use	—
R258	use	—
R260	use	—
R261	use	—
R267	use	—
R268	use	—
C153	use	—
C155	use	—
C158	use	—
C159	use	—
C160	use	—
C163	use	—
C254	use	—
C255	use	—
C256	use	—
J2	—	use
J3	—	use
J4	—	use
L152	use	—
L154	use	—

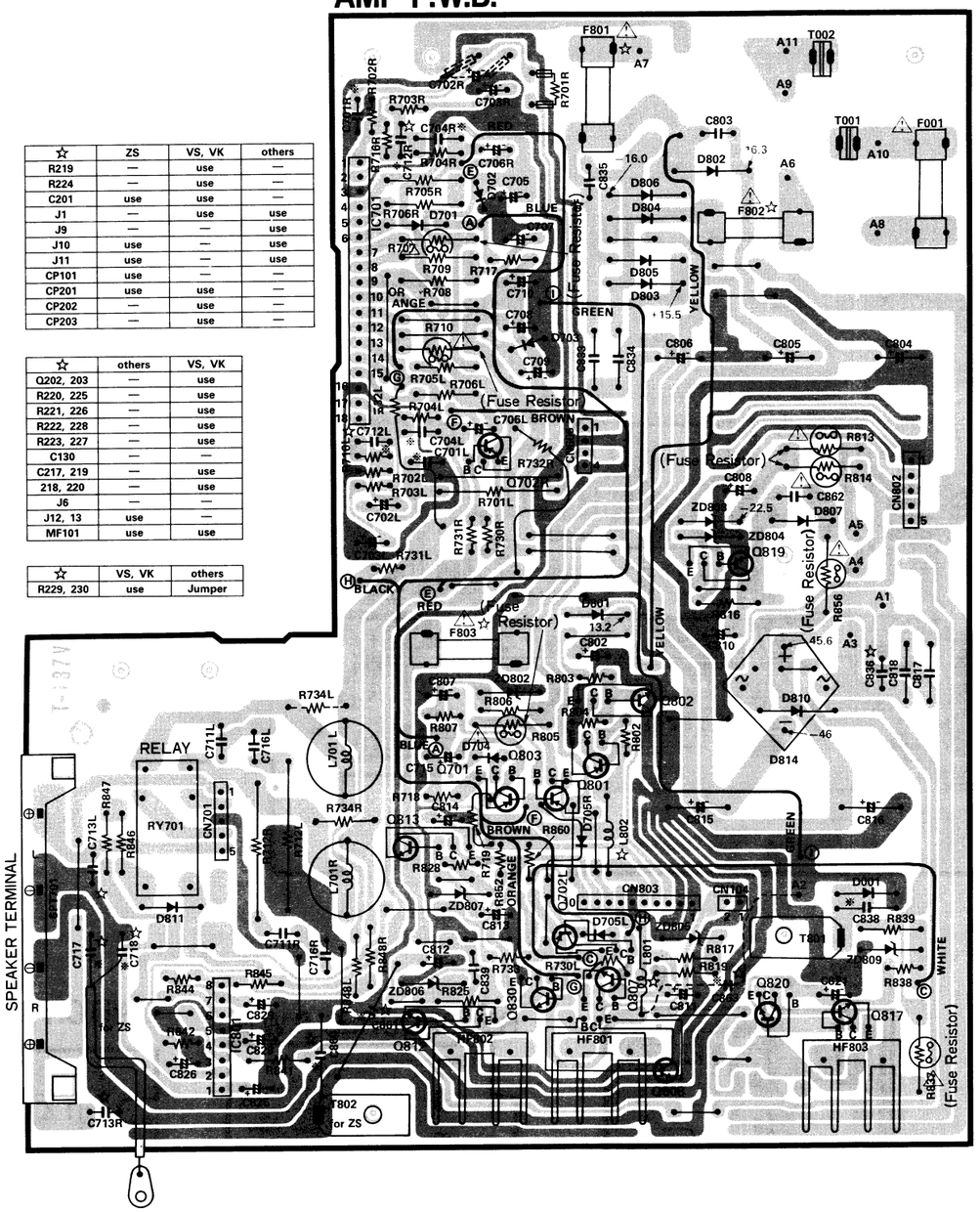
☆	ZS	VS, VK	others
R219	—	use	—
R224	—	use	—
C201	use	use	—
J1	—	use	use
J9	—	—	use
J10	use	—	use
J11	use	—	use
CP101	use	—	—
CP201	use	use	—
CP202	—	use	—
CP203	—	use	—

☆	others	VS, VK
Q202, 203	—	use
R220, 225	—	use
R221, 226	—	use
R222, 228	—	use
R223, 227	—	use
C130	—	—
C217, 219	—	use
218, 220	—	use
J6	—	—
J12, 13	use	—
MF101	use	use

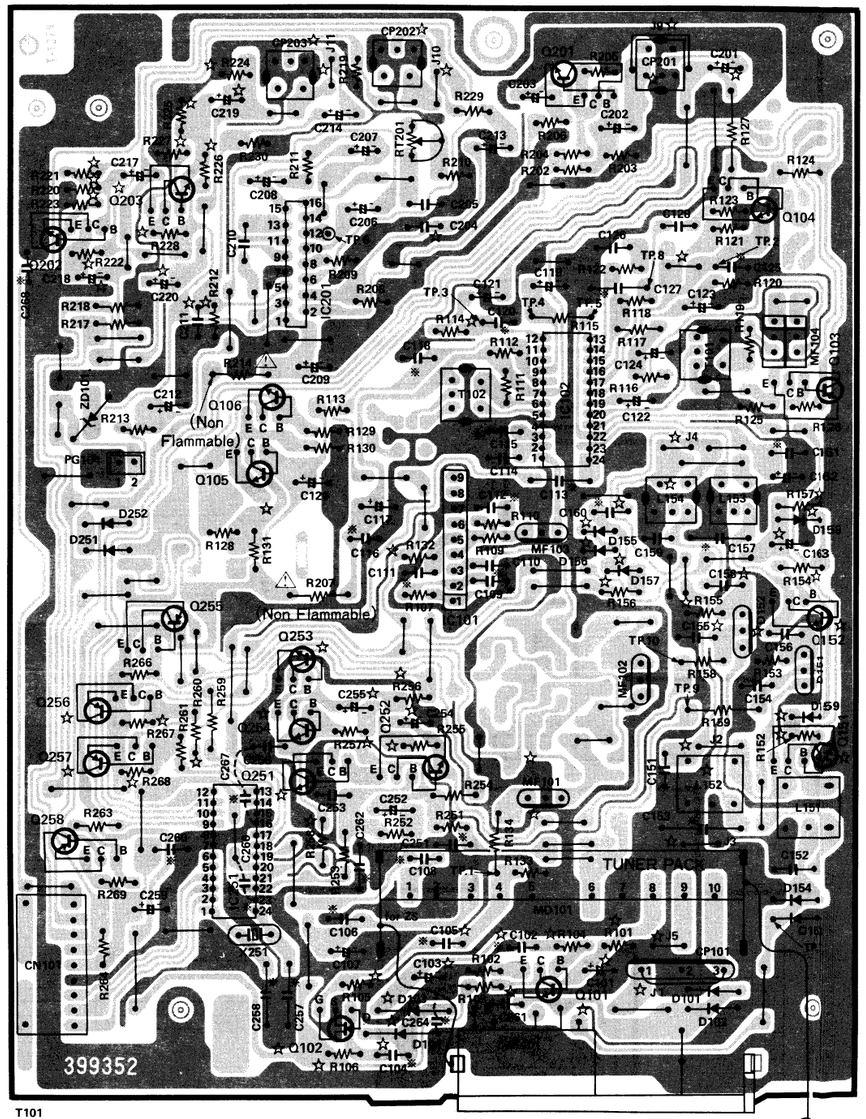
☆	VS, VK	others
R229, 230	use	Jumper

☆	ZS	others
Q101	use	—
Q102	use	—
D103	use	—
D104	use	—
R101	use	—
R102	use	—
R103	use	—
R104	use	—
R105	use	—
R106	use	—
R132	use	—
C101	use	—
C102	use	—
C103	use	—
C104	use	—
C105	use	—
C261	—	use
C717	use	—
C718	use	—
C713LR	use	—
C835	use	—
C836	use	—
C860	use	—
C861	use	—
C863	use	—
L801	use	—
L802	use	—
J5	use	—

AMP P.W.B.



TUNER P.W.B.



T101
AM-IF ADJ.

T102
FM S CURVE ADJ.
FM DISCRI ADJ.

RT201
19KHz FREE RUNNING ADJ.

Pin No.	IC701
1, 2	−0.13
3	0
4	−42.5
5	−1.3
6	0.7
7	−45
8	−45.8
9	−46
10	0
11	45.3
12	43.3
13	0
14	−46
15	−1.3
16	0
17	−0.13
18	−0.1

Pin No.	IC801
1~3	0
4	2.2
5	0
6	0.7
7	2.2
8	3.3

	E	C	B
Q701	3.4	3.4	2.7
Q702L, R	0	0	0
Q801	0	5.1	0
Q802	0	0	0.7
Q803	−8.6	−15.9	−9.1
Q807	8.9	15.5	9.5
Q808	8.4	15.5	8.9
Q812	9.4	15.5	9.9
Q813	5.9	9.4	6.5
Q817	12.2	45.0	12.7
Q819	−27	−41.5	−27.8
Q820	12.7	45.0	13.2
Q830	0	13.2	0

	D	G	S
Q102	9.8	0	0

	E	C	B
Q101	0	5.6	0
Q103	FM 9.2 AM 9.8	FM 0 AM 9.8	FM 12 AM 9.2
Q104	0	0	FM 0.6 AM 0
Q105	0	0	0.7
Q106	0	4.7	0
Q201	1.3	2.6	1.9
Q202	0.5	2.0	1.1
Q203	0.5	2.0	1.1
Q251	0	2.4	0.6
Q252	0.6	2.4	1.0
Q253	0	4.7	0.6
Q254	0.6	4.7	1.0

Pin No.	IC102	Pin No.	IC102
1~3	2.5	13	0
4	0	14	1.4
5	9.5	15	1.6
6	9.4	16,17	0
7	9.2	18	2.5
8	5.0	19	1.6
9	3.7	20	FM 0 AM 98
10	2.4		
11	3.6	21~23	3.9
12	3.2	24	3.1

Pin No.	IC101
1, 2	2.4
3	2.5
4	2.6
5	4.4
6	2.6
7	0
8	1.8
9	2.5

Pin No.	IC201
1	7.0
2	1.6
3	1.8
4, 5	2.8
6	5.0
7	0
8	0.3
9	3.7
10~15	1.6
16	0

Pin No.	MD101
3	12.0
6	Low High 1.81—7.7

Pin No.	IC251
9	FM AUTO 5.3 FM MONO 0.3
20	5.3

Q151

Pin No.	MW	LW
E	0	0
C	3.6	3.7
B	0	4.4

Q152

Pin No.	MW	LW
E	0	0
C	0	0
B	0	0.6

Circuit No.	Voltage
TP.9	Low High 1.2 — 9.4
TP.10	Low High 1.2 — 4.7

	Q255		Q256		Q257	
E	12.1		12.1		12.1	
C	FM	12.1	MW	12.1	LW	12.1
B	FM LW/MW	11.4 12.1	MW FM/LW	11.5 12.1	LW FM/AM	11.4 12.1

	Q258
E	5.3
C	FM AUTO 0 FM MONO 5.2
B	FM AUTO 5.3 FM MONO 4.6

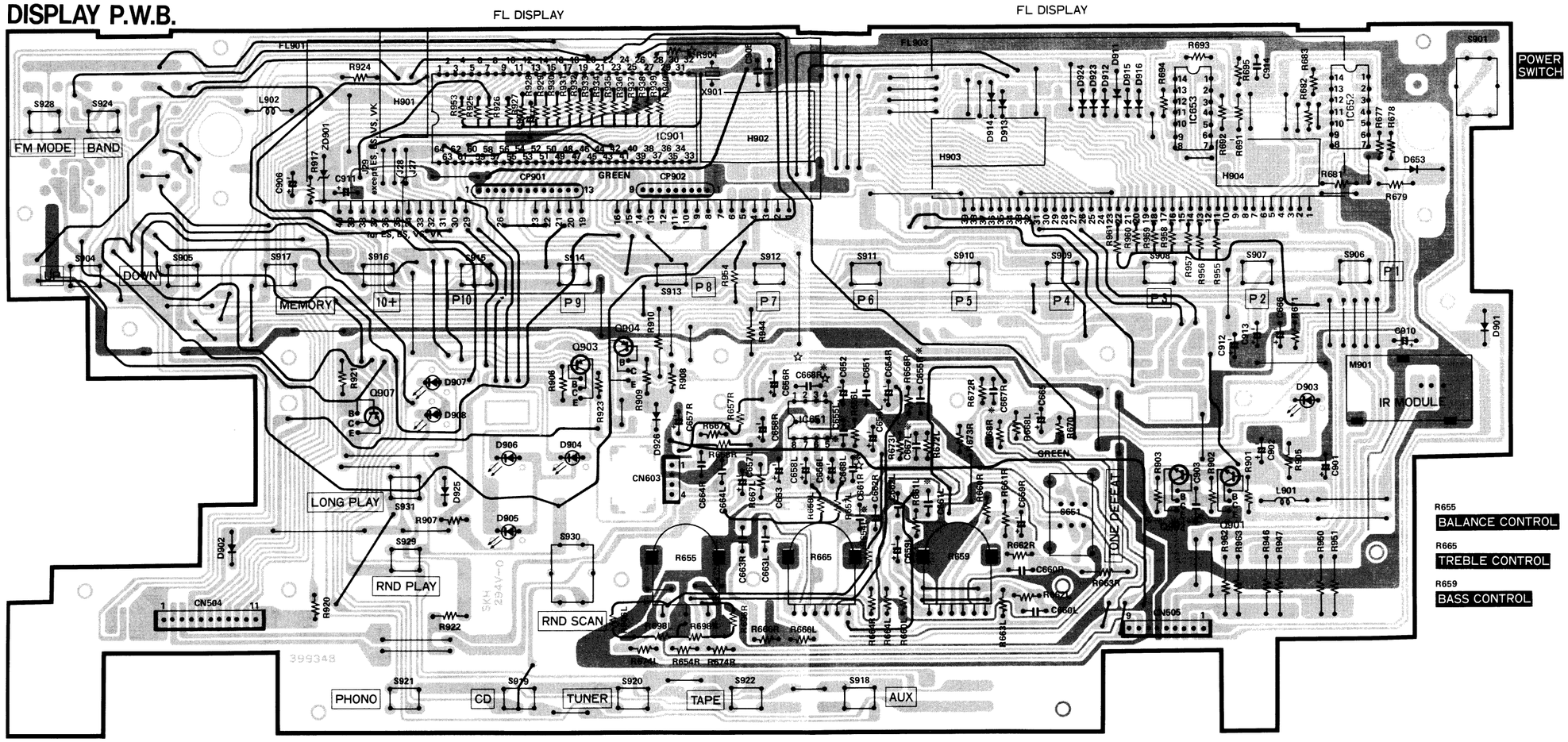
PRINTED WIRING BOARD

〔 : Earth , : Others 〕

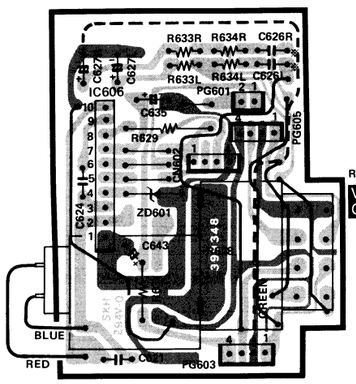
※ : Axial lead cylindrical ceramic capacitor.

The circuit symbol (☆) means difference for destination. (Refer to the table in the drowing)

DISPLAY P.W.B.



Pin No.	IC606
1	0
2	0.6
3	0.8
4	1.0
5.6	0
7.8	9.3
9	0.9
10	0.6



VOLUME P.W.B.

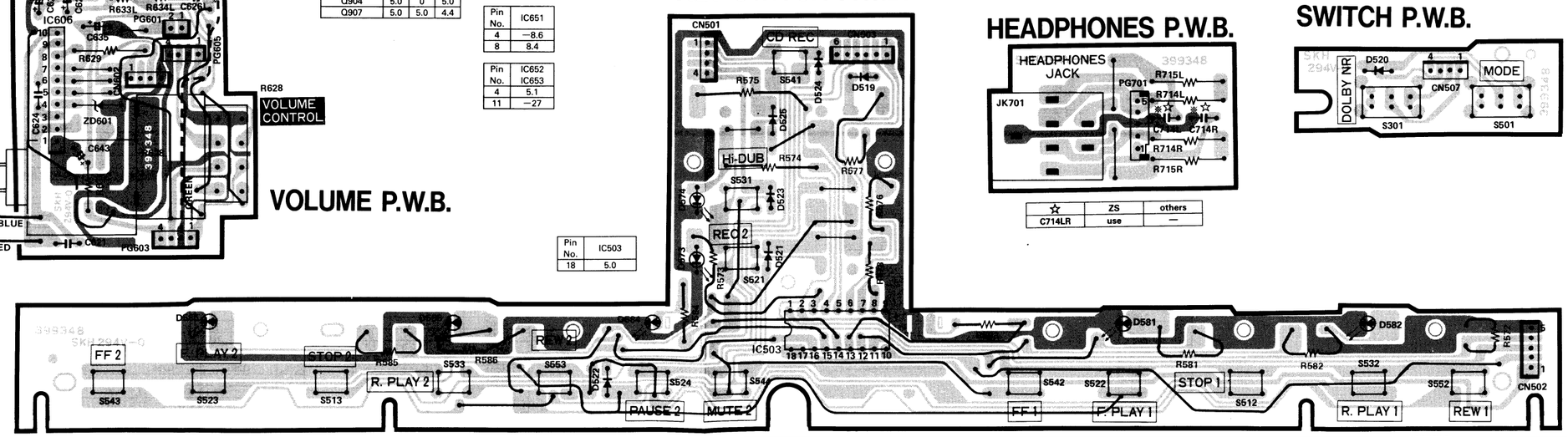
	E	C	B
Q901	0	0	0.6
Q902	0	5.0	0
Q903	5.1	5.0	4.4
Q904	5.0	0	5.0
Q907	5.0	5.0	4.4

Pin No.	IC901
58	−4.0
64	5.0

Pin No.	IC651
4	−8.6
8	8.4

Pin No.	IC652 IC653
4	5.1
11	−27

KEY SWITCH P.W.B.



Pin No.	IC503
18	5.0

HEADPHONES P.W.B.

☆	ZS	others
C714LR	use	—

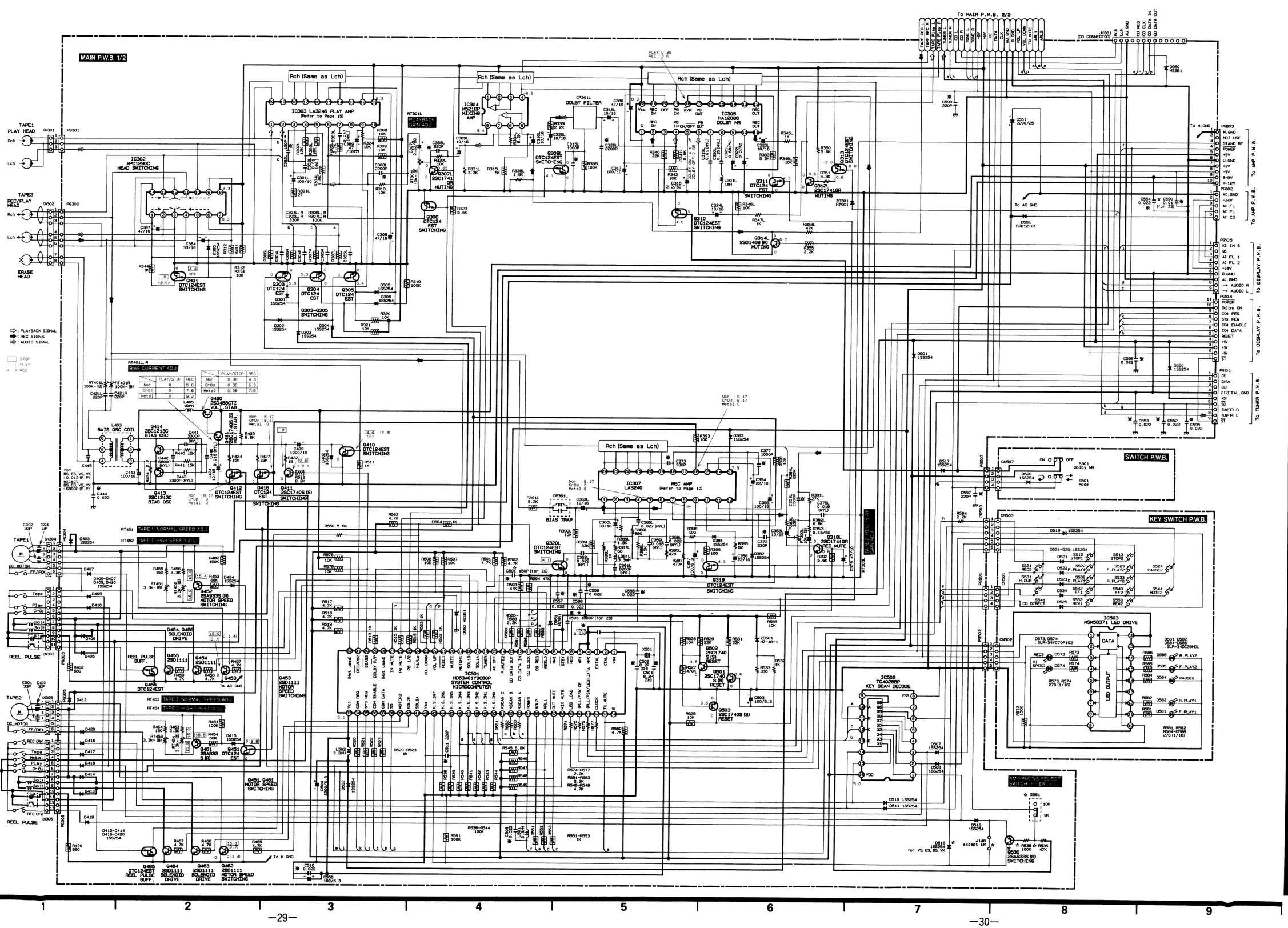
SWITCH P.W.B.

CIRCUIT DIAGRAM

〔■ : +B, ▬ : −B〕

※ : Axial lead cylindrical ceramic capacitor.

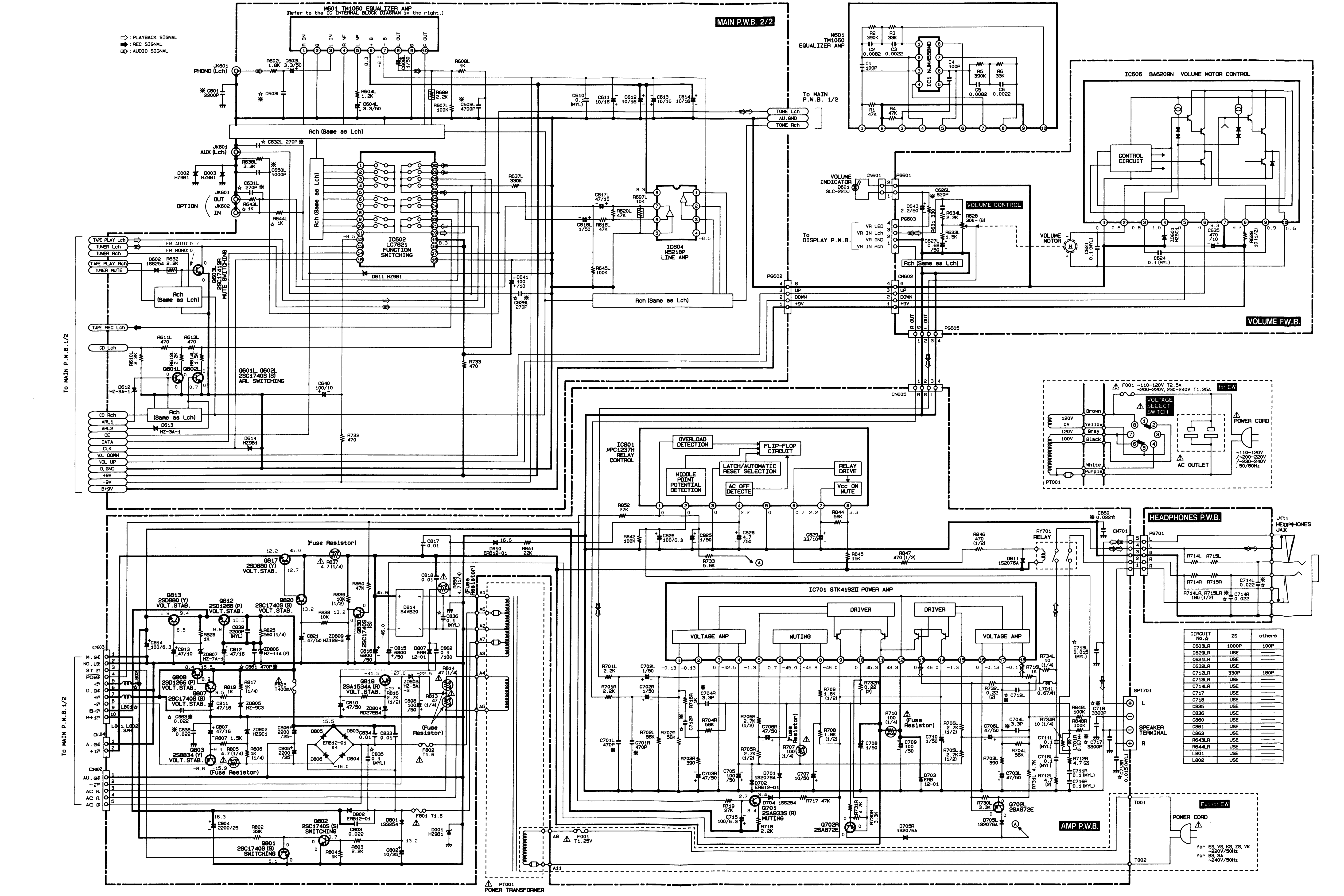
The circuit symbol (☆) means difference for destination. (Refer to the table in the drowing)



CIRCUIT DIAGRAM 〔▬ : +B, ▬ : −B〕

※ : Axial lead cylindrical ceramic capacitor.

The circuit symbol (☆) means difference for destination. (Refer to the table in the drowing)


M601 TM1060 EQUALIZER AMP
(Refer to the IC INTERNAL BLOCK DIAGRAM in the right.)
MAIN P.W.B. 2/2
: PLAYBACK SIGNAL
: REC SIGNAL
: AUDIO SIGNAL
JK601 PHONO (Lch)
JK601 AUX (Lch)
OPTION
JK601 OUT
JK602 IN
Rch (Same as Lch)
IC602 LC7821 FUNCTION SWITCHING
IC604 M5218P LINE AMP
Q603L 2SC1741QR MUTE SWITCHING
Q601L, Q602L 2SC1740S (S) ARL SWITCHING
TAPE PLAY Lch
TUNER Lch
TUNER Rch
TAPE PLAY Rch
TUNER MUTE
TAPE REC Lch
CD Lch
CD Rch
ARL1
ARL2
CE
DATA
CLK
VOL DOWN
VOL UP
D. GND
+9V
-9V
B+9V
To MAIN P.W.B. 1/2
TONE Lch
AU. GND
TONE Rch
M601 TM1060 EQUALIZER AMP
IC1 NJM4558MD
IC606 BA6209N VOLUME MOTOR CONTROL
CONTROL CIRCUIT
VOLUME INDICATOR D601 SLC-22DU
VOLUME CONTROL
VOLUME MOTOR
To DISPLAY P.W.B.
VR LED
VR IN Lch
VR GND
VR IN Rch
VOLUME P.W.B.
IC801 μPC1237H RELAY CONTROL
OVERLOAD DETECTION
FLIP-FLOP CIRCUIT
MIDDLE POINT POTENTIAL DETECTION
LATCH/AUTOMATIC RESET SELECTION
AC OFF DETECTE
RELAY DRIVE
Vcc ON MUTE
IC701 STK4192II POWER AMP
VOLTAGE AMP
MUTING
DRIVER
Q817 2SD880 (Y) VOLT.STAB.
Q813 2SD880 (Y) VOLT.STAB.
Q812 2SD1266 (P) VOLT.STAB.
Q820 2SC1740S (S) VOLT.STAB.
Q808 2SD1266 (P) VOLT.STAB.
Q807 2SC1740S (S) VOLT.STAB.
Q803 2SB834 (Y) VOLT.STAB.
Q819 2SA1534A (R) VOLT.STAB.
Q802 2SC1740S (S) SWITCHING
Q801 2SC1740S (S) SWITCHING
Q830 2SC1740S (S)
D814 S4VB20
(Fuse Resistor)
PT001 POWER TRANSFORMER
F001 ~110-120V T2.5A ~200-220V, 230-240V T1.25A
for EW
VOLTAGE SELECT SWITCH
POWER CORD
AC OUTLET
~110-120V /~200-220V /~230-240V, 50/60Hz
HEADPHONES P.W.B.
JK701 HEADPHONES JACK
RY701 RELAY
SPT701 SPEAKER TERMINAL
Q701 2SA933S (R) MUTING
Q702R 2SA872E
Q702L 2SA872E
AMP P.W.B.
Except EW
POWER CORD
for ES, VS, KS, ZS, VK ~220V/50Hz
for BS, SA ~240V/50Hz

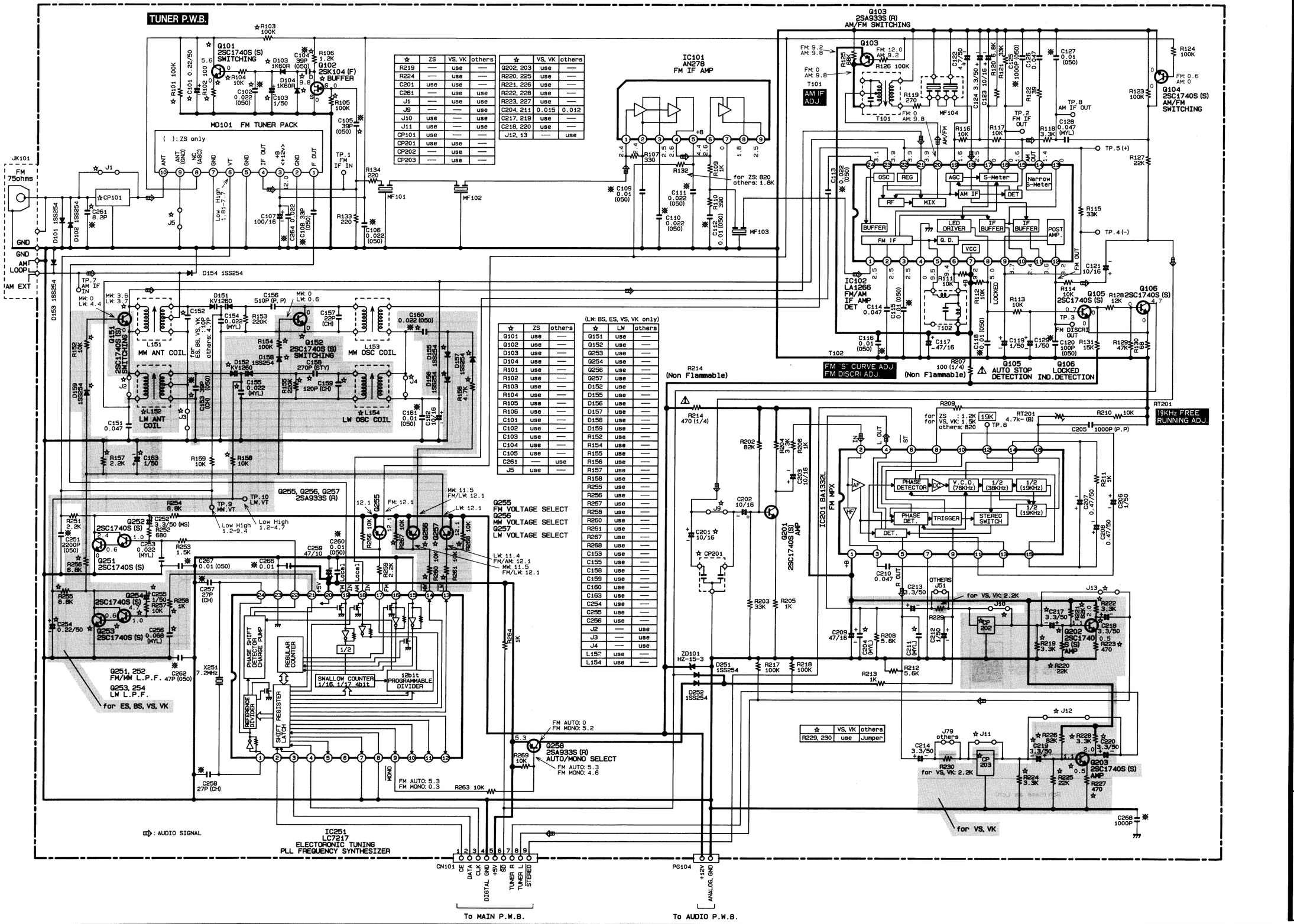
CIRCUIT No.☆	ZS	others
C603LR	1000P	100P
C629LR	USE	——
C631LR	USE	——
C632LR	USE	——
C712LR	330P	180P
C713LR	USE	——
C714LR	USE	——
C717	USE	——
C718	USE	——
C835	USE	——
C836	USE	——
C860	USE	——
C861	USE	——
C863	USE	——
R643LR	USE	——
R644LR	USE	——
L801	USE	——
L802	USE	——

CIRCUIT DIAGRAM

〔■■■ : +B, ■■■ : −B〕

※ : Axial lead cylindrical ceramic capacitor.

The circuit symbol (☆) means difference for destination. (Refer to the table in the drowing)



☆	ZS	VS, VK	others
R219	—	use	—
R224	—	use	—
C201	use	use	—
C261	—	use	use
J1	—	use	use
J9	—	—	use
J10	use	—	use
J11	use	—	use
CP101	use	—	—
CP201	use	use	—
CP202	use	use	—
CP203	use	use	—

☆	VS, VK	others
Q202, 203	use	—
R220, 225	use	—
R221, 226	use	—
R222, 228	use	—
R223, 227	use	—
C204, 211	0.015	0.012
C217, 219	use	—
C218, 220	use	—
J12, 13	—	use

☆	ZS	others
G101	use	—
G102	use	—
D103	use	—
D104	use	—
R101	use	—
R102	use	—
R103	use	—
R104	use	—
R105	use	—
R106	use	—
C101	use	—
C102	use	—
C103	use	—
C104	use	—
C105	use	—
C261	—	use
J5	use	—

(LW: BS, ES, VS, VK only)

☆	LW	others
G151	use	—
G152	use	—
G253	use	—
G254	use	—
G256	use	—
G257	use	—
D152	use	—
D155	use	—
D156	use	—
D157	use	—
D158	use	—
D159	use	—
R152	use	—
R154	use	—
R155	use	—
R156	use	—
R157	use	—
R158	use	—
R255	use	—
R256	use	—
R257	use	—
R258	use	—
R260	use	—
R261	use	—
R267	use	—
R268	use	—
C153	use	—
C155	use	—
C158	use	—
C159	use	—
C160	use	—
C163	use	—
C254	use	—
C255	use	—
C256	use	—
J2	—	use
J3	—	use
J4	—	use
L152	use	—
L154	use	—

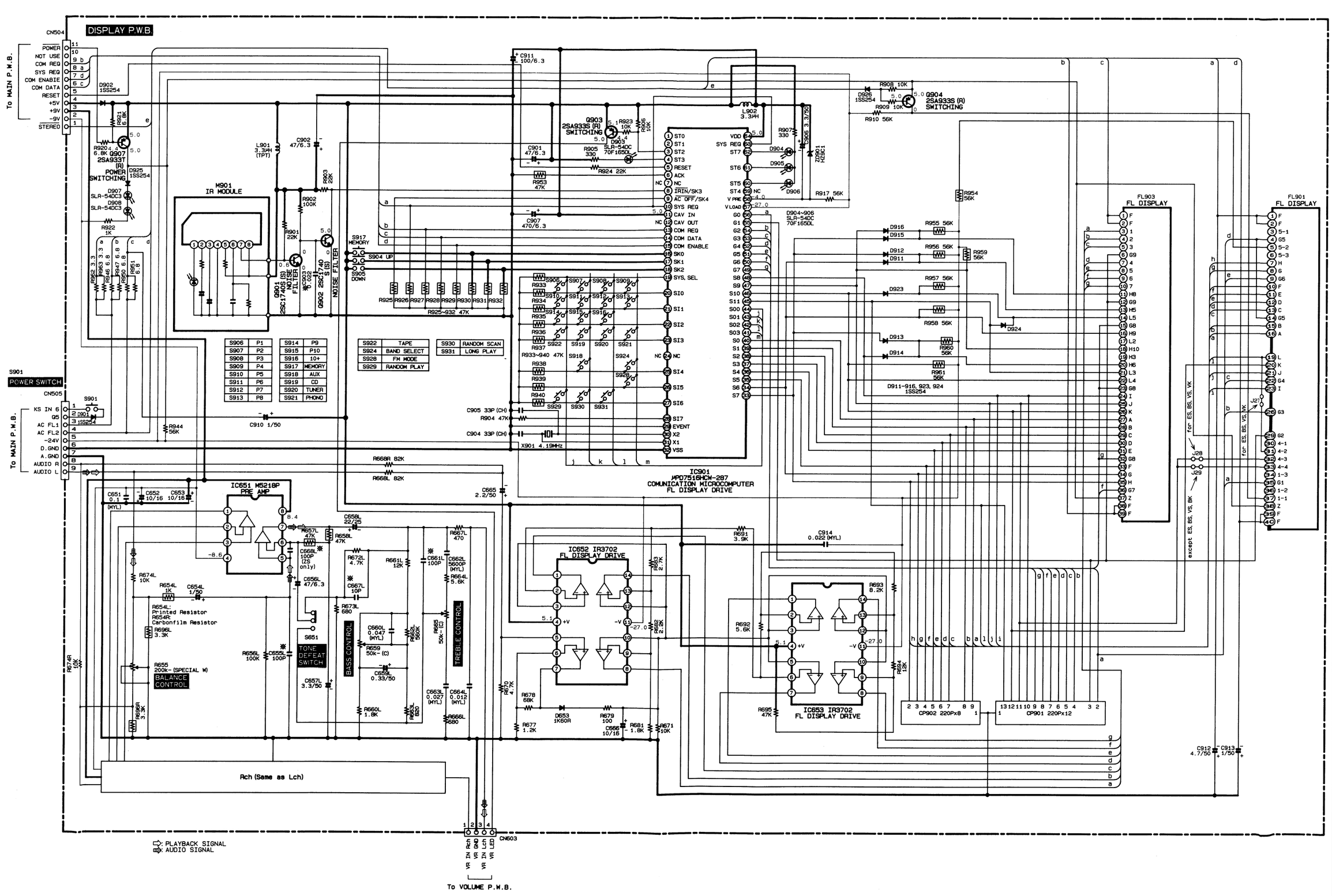
☆	VS, VK	others
R229, 230	use	Jumper

CIRCUIT DIAGRAM

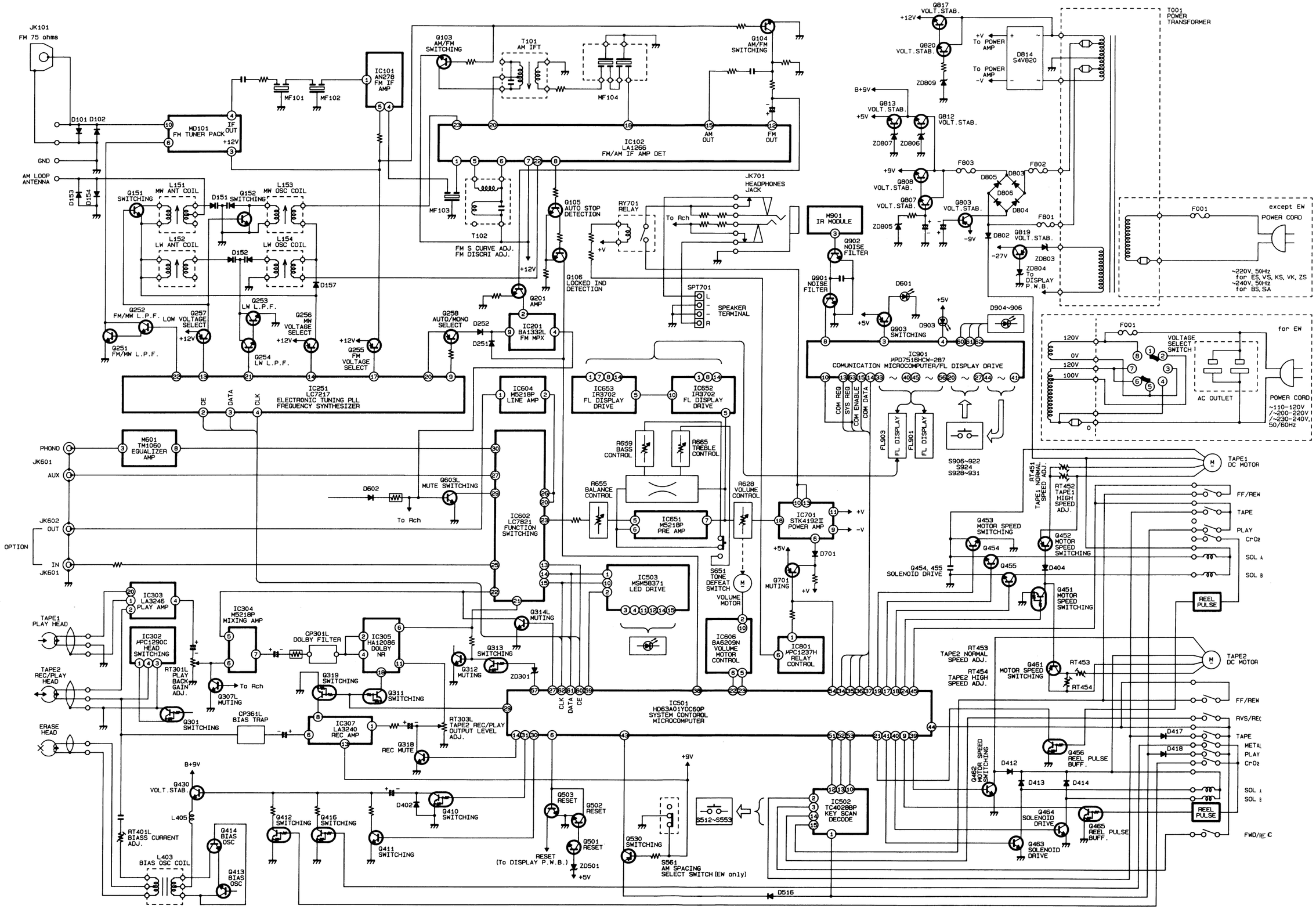
〔■■■ : +B, ——— : −B〕

※ : Axial lead cylindrical ceramic capacitor.

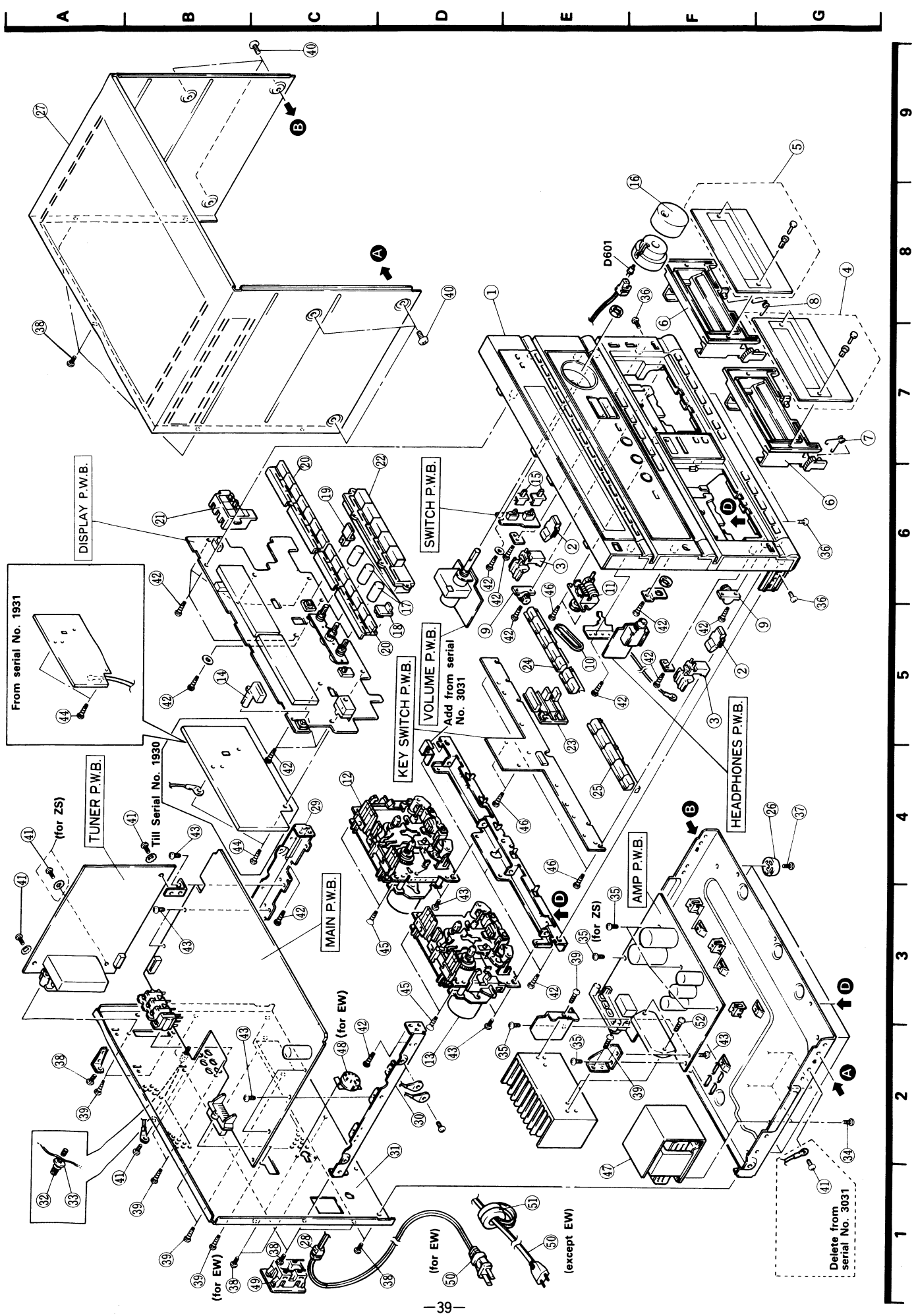
The circuit symbol (☆) means difference for destination. (Refer to the table in the drowing)



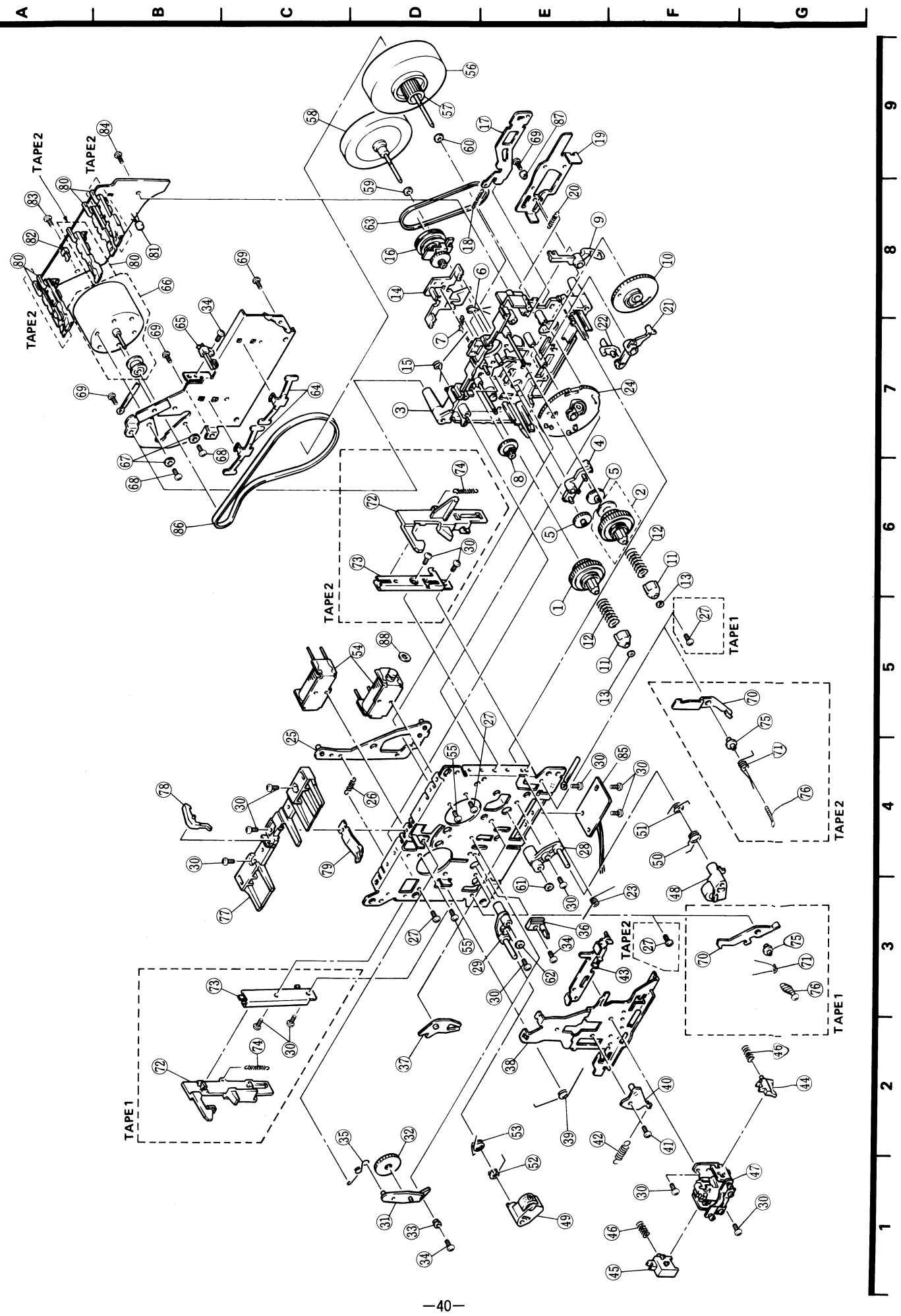
BLOCK DIAGRAM



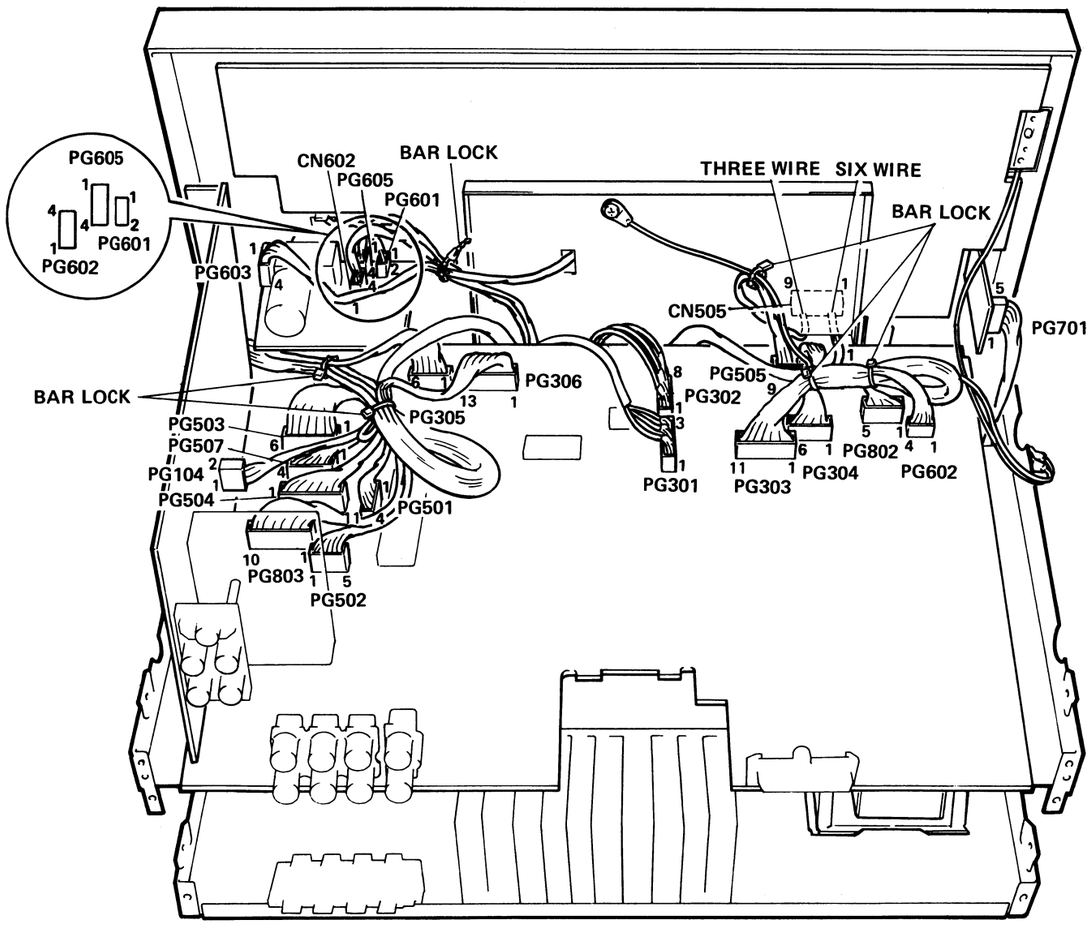
EXPLODED VIEW (Cabinet) ● Nos. are reference Nos. of parts list.

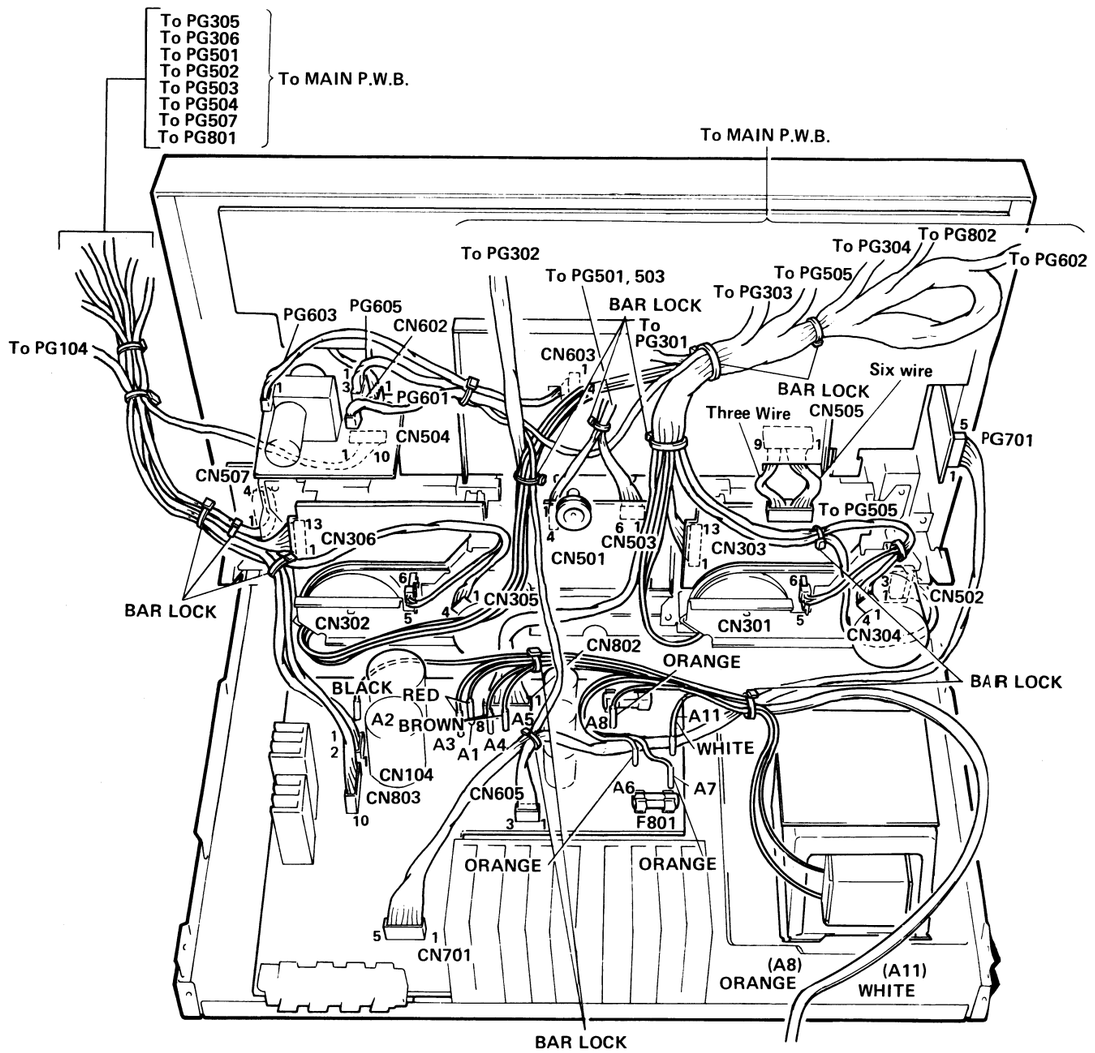


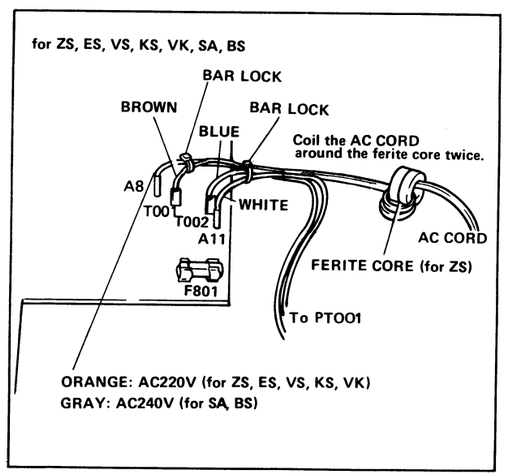
(Cassette Chasis) ● Nos. are reference Nos. of parts list.

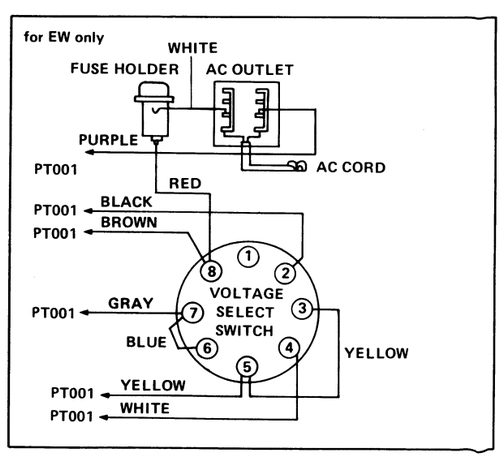


WIRE LAYOUT DIAGRAM









REPLACEMENT PARTS LIST

CC: Cylindrical ceramic EL: Electrolytic NF: Non flammable
CD: Ceramic discal FR: Fuse resistor PP: Polypro-pylene
CF: Carbon film ME: Metal oxide ST: Styron
CO: Composition MF: Mylar film

HRD-MD58 **HRD-MD58**

SYMBOL No.	PART No.	DESCRIPTION
		CAPACITORS
C001	0248712	CD 33PF ±10% 50V
C002	0248712	CD 33PF ±10% 50V
C003	0248712	CD 33PF ±10% 50V
C004	0248712	CD 33PF ±10% 50V
C101	0252455	EL 0.22 μF ±20% 50V [for ZS]
C102	0240066	CC 0.022 μF +80% −20% 25V [for ZS]
C103	0252459	EL 1 μF ±20% 50V [for ZS]
C104	0230626	CC 39PF ±5% 50V [for ZS]
C105	0230626	CC 39PF ±5% 50V [for ZS]
C106	0240066	CC 0.022 μF +80% −20% 25V
C107	0252426	EL 100 μF ±20% 16V
C108	0230624	CC 33PF ±5% 50V
C109	0240061	CC 0.01 μF ±30% 16V
C110	0240066	CC 0.022 μF +80% −20% 25V
C111	0240066	CC 0.022 μF +80% −20% 25V
C112	0240061	CC 0.01 μF ±30% 16V
C113	0240066	CC 0.022 μF +80% −20% 25V
C114	0209175	CD 0.047 μF +80% −20% 50V
C115	0240061	CC 0.01 μF ±30% 16V
C116	0240061	CC 0.01 μF ±30% 16V
C117	0252425	EL 47 μF ±20% 16V
C118	0240061	CC 0.01 μF ±30% 16V
C119	0252459	EL 1 μF ±20% 50V
C120	0240033	CC 100PF ±10% 50V
C121	0252422	EL 10 μF ±20% 16V
C122	0252462	EL 4.7 μF ±20% 50V
C123	0252422	EL 10 μF ±20% 16V
C124	0252461	EL 3.3 μF ±20% 50V
C125	0240045	CC 1000PF ±10% 50V
C126	0209175	CD 0.047 μF +80% −20% 50V
C127	0240061	CC 0.01 μF ±30% 16V
C128	0275015	MF 0.047 μF ±10% 50V
C129	0252459	EL 1 μF ±20% 50V
C151	0209175	CD 0.047 μF +80% −20% 50V
C152	0230652	CC 10PF ±5% 50V [for BS, ES, VS, VK]
C152	0230648	CC 4.7PF ±10% 50V [except BS, ES, VS, VK]
C153	0230076	CC 39PF ±5% 50V [for BS, ES, VS, VK]
C154	0275013	MF 0.022 μF ±10% 50V
C155	0275013	MF 0.022 μF ±10% 50V [for BS, ES, VS, VK]
C156	0279326	PP 510PF ±2% 100V
C157	0230070	CC 22PF ±5% 50V
C158	0228321	ST 270PF ±5% 50V [for BS, ES, VS, VK]
C159	1246466	CD 120PF ±5% 50V [for BS, ES, VS, VK]
C160	0240066	CC 0.022 μF +80% −20% 25V [for BS, ES, VS, VK]
C161	0240061	CC 0.01 μF ±30% 16V
C162	0252422	EL 10 μF ±20% 16V
C163	0252459	EL 1 μF ±20% 50V [for BS, ES, VS, VK]
C201	0252422	EL 10 μF ±20% 16V [for ZS, VS, VK]
C202	0252422	EL 10 μF ±20% 16V
C203	0252422	EL 10 μF ±20% 16V
C204	0275031	MF 0.012 μF ±10% 50V [except VS, VK]
C204	0275012	MF 0.015 μF ±10% 50V [for VS, VK]
C205	0279336	PP 1000PF ±5% 100V
C206	0252459	EL 1 μF ±20% 50V
C207	0252457	EL 0.47 μF ±20% 50V
C208	0252457	EL 0.47 μF ±20% 50V
C209	0252425	EL 47 μF ±20% 16V
C210	0209175	CD 0.047 μF +80% −20% 50V
C211	0275012	MF 0.015 μF ±10% 50V [for VS, VK]
C211	0275031	MF 0.012 μF ±10% 50V [except VS, VK]
C212	0252459	EL 1 μF ±20% 50V
C213	0252461	EL 3.3 μF ±20% 50V
C214	0252461	EL 3.3 μF ±20% 50V
C217	0252461	EL 3.3 μF ±20% 50V [for VS, VK]
C218	0252461	EL 3.3 μF ±20% 50V [for VS, VK]
C219	0252461	EL 3.3 μF ±20% 50V [for VS, VK]
C220	0252461	EL 3.3 μF ±20% 50V [for VS, VK]
C251	0240053	CC 2200PF ±20% 16V
C252	1252879	EL 3.3 μF ±20% 50V
C253	0275013	MF 0.022 μF ±10% 50V
C254	0252455	EL 0.22 μF ±20% 50V [for BS, ES, VS, VK]
C255	0252459	EL 1 μF ±20% 50V [for BS, ES, VS, VK]
C256	0275016	MF 0.068 μF ±10% 50V [for BS, ES, VS, VK]
C257	0230072	CC 27PF ±5% 50V
C258	0230072	CC 27PF ±5% 50V
C259	0252413	EL 47 μF ±20% 10V
C260	0240061	CC 0.01 μF ±30% 16V
C261	0230611	CC 8.2PF ±10% 50V [except ZS]
C262	0230628	CC 47PF ±5% 50V
C264	0240066	CC 0.022 μF +80% −20% 25V
C266	0240061	CC 0.01 μF ±30% 16V
C267	0240061	CC 0.01 μF ±30% 16V
C268	0240045	CC 1000PF ±10% 50V
C301LR	0252414	EL 100 μF ±20% 10V
C302LR	0275011	MF 0.01 μF ±10% 50V
C303LR	0275015	MF 0.047 μF ±10% 50V
C304LR	0240039	CC 330PF ±10% 50V
C305LR	0240039	CC 330PF ±10% 50V
C306	0252425	EL 47 μF ±20% 16V
C307LR	0252455	EL 0.22 μF ±20% 50V
C308LR	0240053	CC 2200PF ±20% 16V
C309LR	0252422	EL 10 μF ±20% 16V
C310LR	0252422	EL 10 μF ±20% 16V
C315LR	0240045	CC 1000PF ±10% 50V
C316LR	0252422	EL 10 μF ±20% 16V
C317	0252414	EL 100 μF ±20% 10V
C318	0252460	EL 2.2 μF ±20% 50V
C319LR	0275011	MF 0.01 μF ±10% 50V
C320LR	0275012	MF 0.015 μF ±10% 50V
C321LR	0252458	EL 0.68 μF ±20% 50V
C322LR	0252460	EL 2.2 μF ±20% 50V
C323LR	0252422	EL 10 μF ±20% 16V
C324LR	0252422	EL 10 μF ±20% 16V
C325LR	0252422	EL 10 μF ±20% 16V
C326LR	0240053	CC 2200PF ±20% 16V
C351LR	0240051	CC 1500PF ±20% 16V
C352LR	0252804	EL 0.15 μF ±20% 50V
C353LR	0252422	EL 10 μF ±20% 16V
C354	0252411	EL 22 μF ±20% 10V
C355	0252426	EL 100 μF ±20% 16V
C356	0252411	EL 22 μF ±20% 10V
C357	0252402	EL 100 μF ±20% 6.3V
C358LR	0275013	MF 0.022 μF ±10% 50V
C359LR	0275032	MF 0.018 μF ±10% 50V
C360LR	0252424	EL 33 μF ±20% 16V
C361LR	0274036	MF 8200PF ±10% 50V
C362LR	0275013	MF 0.022 μF ±10% 50V
C363LR	0252422	EL 10 μF ±20% 16V
C366LR	0275033	MF 0.027 μF ±10% 50V
C372	0240039	CC 330PF ±10% 50V
C373	0240039	CC 330PF ±10% 50V
C375LR	0275032	MF 0.018 μF ±10% 50V
C377	0240045	CC 1000PF ±10% 50V
C379	0252413	EL 47 μF ±20% 10V
C380	1252413	EL 47 μF ±20% 10V
C382LR	0240035	CC 150PF ±10% 50V
C384	0252424	EL 33 μF ±20% 16V
C387	0252413	EL 47 μF ±20% 10V
C388LR	0240044	CC 820PF ±10% 50V
C389	0252425	EL 47 μF ±20% 16V
C409	1252418	EL 1000 μF ±20% 10V
C413	0252426	EL 100 μF ±20% 16V
C415	0279338	PP 0.012 μF ±5% 100V [for BS, ES, VS, VK]
C415	0279332	PP 6800PF ±5% 100V [except BS, ES, VS, VK]
C421LR	0208692	CD 220PF ±5% 50V
C424	0252422	EL 10 μF ±20% 16V
C440	0275012	MF 0.015 μF ±10% 50V
C441	0274014	MF 3300PF ±10% 50V
C442	0274016	MF 6800PF ±10% 50V
C443	0274014	MF 3300PF ±10% 50V
C444	0240066	CC 0.022 μF +80% −20% 25V
C501	0230651	CC 8.2PF ±10% 50V
C502	0230651	CC 8.2PF ±10% 50V
C503	0252402	EL 100 μF ±20% 6.3V
C504	1252407	EL 2200 μF ±20% 6.3V
C508	0240066	CC 0.022 μF +80% −20% 25V
C509	0240066	CC 0.022 μF +80% −20% 25V
C510	0240066	CC 0.022 μF +80% −20% 25V
C511	0240037	CC 220PF ±10% 50V
C551	1252442	EL 2200 μF ±20% 25V
C552	0240066	CC 0.022 μF +80% −20% 25V
C553	0240066	CC 0.022 μF +80% −20% 25V
C554	0240066	CC 0.022 μF +80% −20% 25V
C555	0240066	CC 0.022 μF +80% −20% 25V
C556	0240066	CC 0.022 μF +80% −20% 25V
C557	0240066	CC 0.022 μF +80% −20% 25V
C558	0252402	EL 100 μF ±20% 6.3V
C590	0240061	CC 0.01 μF ±30% 16V [for ZS]
C591	0240035	CC 150PF ±10% 50V [for ZS]
C593	0240045	CC 1000PF ±10% 50V [for ZS]
C595	0240066	CC 0.022 μF +80% −20% 25V
C596	0240066	CC 0.022 μF +80% −20% 25V
C597	0240037	CC 220PF ±10% 50V
C598	0240066	CC 0.022 μF +80% −20% 25V
C599	0240037	CC 220PF ±10% 50V
C601	0240053	CC 2200PF ±20% 16V
C602LR	0252461	EL 3.3 μF ±20% 50V
C603LR	0240033	CC 100PF ±10% 50V [except ZS]
C603LR	0240045	CC 1000PF ±10% 50V [for ZS]
C604LR	0252461	EL 3.3 μF ±20% 50V
C608LR	0252459	EL 1 μF ±20% 50V
C609LR	0240057	CC 4700PF ±30% 16V
C610	0276011	MF 0.1 μF ±10% 50V
C611	0252422	EL 10 μF ±20% 16V
C612	0252422	EL 10 μF ±20% 16V
C613	0252422	EL 10 μF ±20% 16V
C614	0252422	EL 10 μF ±20% 16V
C616LR	0252459	EL 1 μF ±20% 50V
C617LR	0252425	EL 47 μF ±20% 16V
C621	0276011	MF 0.1 μF ±10% 50V
C624	0276011	MF 0.1 μF ±10% 50V
C626LR	0240044	CC 820PF ±10% 50V
C627LR	0252458	EL 0.68 μF ±20% 50V
C629LR	0240038	CC 270PF ±10% 50V [for ZS]
C631LR	0240038	CC 270PF ±10% 50V [for ZS]
C632LR	0240038	CC 270PF ±10% 50V [for ZS]
C635	1252417	EL 470 μF ±20% 10V
C640	1252414	EL 100 μF ±20% 10V
C641	0252414	EL 100 μF ±20% 10V
C643	0252460	EL 2.2 μF ±20% 50V
C650LR	0240045	CC 1000PF ±10% 50V
C651	0276011	MF 0.1 μF ±10% 50V
C652	0252422	EL 10 μF ±20% 16V
C653	0252422	EL 10 μF ±20% 16V
C654LR	0252459	EL 1 μF ±20% 50V
C655LR	0240033	CC 100PF ±10% 50V
C656LR	0252401	EL 47 μF ±20% 6.3V
C657LR	0252461	EL 3.3 μF ±20% 50V
C658LR	0252434	EL 22 μF ±20% 25V
C659LR	0252456	EL 0.33 μF ±20% 50V
C660LR	0275015	MF 0.047 μF ±10% 50V
C661LR	0240033	CC 100PF ±10% 50V
C662LR	0274035	MF 5600PF ±10% 50V
C663LR	0275033	MF 0.027 μF ±10% 50V
C664LR	0275031	MF 0.012 μF ±10% 50V
C665	0252460	EL 2.2 μF ±20% 50V
C666	0252422	EL 10 μF ±20% 16V
C667LR	0230612	CC 10PF ±5% 50V
C668LR	0240033	CC 100PF ±10% 50V [for ZS]
C701LR	0240041	CC 470PF ±10% 50V
C702LR	0252459	EL 1 μF ±20% 50V
C703LR	0252466	EL 47 μF ±20% 50V
C704LR	0230606	CC 3.3PF ±10% 50V
C705	0252467	EL 100 μF ±20% 50V
C706LR	0252466	EL 47 μF ±20% 50V
C707	0252463	EL 10 μF ±20% 50V
C708	0252459	EL 1 μF ±20% 50V
C709	0252467	EL 100 μF ±20% 50V
C710	0252459	EL 1 μF ±20% 50V
C711LR	0276011	MF 0.1 μF ±10% 50V
C712LR	0240036	CC 180PF ±10% 50V [excpet ZS]
C712LR	0240039	CC 330PF ±10% 50V [for ZS]
C713LR	0275012	MF 0.015 μF ±10% 50V [for ZS]
C714LR	0240066	CC 0.022 μF +80% −20% 25V [for ZS]
C715	0252402	EL 100 μF ±20% 6.3V
C716LR	0276011	MF 0.1 μF ±10% 50V
C717	0240055	CC 3300PF ±20% 16V [for ZS]
C718	0240055	CC 3300PF ±20% 16V [for ZS]
C802	0252433	EL 10 μF ±20% 25V
C803	0244173	CD 0.022 μF +80% −20% 50V
C804	1252442	EL 2200 μF ±20% 25V
C805	1252442	EL 2200 μF ±20% 25V
C806	1252442	EL 2200 μF ±20% 25V
C807	0252425	EL 47 μF ±20% 16V
C808	0252467	EL 100 μF ±20% 50V
C810	0252466	EL 47 μF ±20% 50V
C811	0252425	EL 47 μF ±20% 16V
C812	0252425	EL 47 μF ±20% 16V
C813	0252413	EL 47 μF ±20% 10V
C814	0252402	EL 100 μF ±20% 6.3V
C815	0259931	EL 6800 μF ±20% 50V
C816	0259931	EL 6800 μF ±20% 50V
C817	0245408	CD 0.01 μF ±20% 500V
C818	0245408	CD 0.01 μF ±20% 500V
C821	0252466	EL 47 μF ±20% 50V
C825	0252459	EL 1 μF ±20% 50V
C826	0252402	EL 100 μF ±20% 6.3V
C828	0252462	EL 4.7 μF ±20% 50V
C829	0252412	EL 33 μF ±20% 10V
C833	0245408	CD 0.01 μF ±20% 500V
C834	0245408	CD 0.01 μF ±20% 500V
C835	0276011	MF 0.1 μF ±10% 50V [for ZS]
C836	0276011	MF 0.1 μF ±10% 50V [for ZS]
C838	0240066	CC 0.022 μF +80% −20% 25V
C839	0274013	MF 2200PF ±10% 50V
C860	0240066	CC 0.022 μF +80% −20% 25V [for ZS]
C861	0240041	CC 470PF ±10% 50V [for ZS]
C862	1276511	MF 0.1 μF ±10% 100V
C863	0240066	CC 0.022 μF +80% −20% 25V [for ZS]
C901	0252401	EL 47 μF ±20% 6.3V
C902	0252401	EL 47 μF ±20% 6.3V
C903	0240066	CC 0.022 μF +80% −20% 25V
C904	0246452	CD 33PF ±5% 50V
C905	0246452	CD 33PF ±5% 50V
C906	0252461	EL 3.3 μF ±20% 50V
C907	0252405	EL 470 μF ±20% 6.3V
C910	0252459	EL 1 μF ±20% 50V
C911	0252402	EL 100 μF ±20% 6.3V
C912	0252462	EL 4.7 μF ±20% 50V
C913	0252459	EL 1 μF ±20% 50V
C914	0275013	MF 0.022 μF ±10% 50V
		RESISTORS
R101	0113663	CF 100KΩ ±5% SRD1/6P [for ZS]
R102	0113591	CF 100Ω ±5% SRD1/6P [for ZS]
R103	0113663	CF 100KΩ ±5% SRD1/6P [for ZS]
R104	0113639	CF 10KΩ ±5% SRD1/6P [for ZS]
R105	0113663	CF 100KΩ ±5% SRD1/6P [for ZS]
R106	0113617	CF 1.2KΩ ±5% SRD1/6P [for ZS]
R107	0113603	CF 330Ω ±5% SRD1/6P
R109	0113615	CF 1KΩ ±5% SRD1/6P
R110	0113605	CF 390Ω ±5% SRD1/6P
R111	0113639	CF 10KΩ ±5% SRD1/6P
R112	0113639	CF 10KΩ ±5% SRD1/6P
R113	0113639	CF 10KΩ ±5% SRD1/6P
R114	0113639	CF 10KΩ ±5% SRD1/6P
R115	0113651	CF 33KΩ ±5% SRD1/6P
R116	0113639	CF 10KΩ ±5% SRD1/6P
R117	0113639	CF 10KΩ ±5% SRD1/6P
R118	0113627	CF 3.3KΩ ±5% SRD1/6P
R119	0113601	CF 270Ω ±5% SRD1/6P
R120	0113635	CF 6.8KΩ ±5% SRD1/6P
R121	0113651	CF 33KΩ ±5% SRD1/6P
R122	0113581	CF 39Ω ±5% SRD1/6P
R123	0113663	CF 100KΩ ±5% SRD1/6P
R124	0113663	CF 100KΩ ±5% SRD1/6P
R125	0113659	CF 68KΩ ±5% SRD1/6P
R126	0113663	CF 100KΩ ±5% SRD1/6P
R127	0113647	CF 22KΩ ±5% SRD1/6P
R128	0113641	CF 12KΩ ±5% SRD1/6P
R129	0113655	CF 47KΩ ±5% SRD1/6P
R130	0113587	CF 68Ω ±5% SRD1/6P
R131	0113643	CF 15KΩ ±5% SRD1/6P
R132	0113613	CF 820Ω ±5% SRD1/6P [for ZS]
R132	0113621	CF 1.8KΩ ±5% SRD1/6P [except ZS]
R133	0113599	CF 220Ω ±5% SRD1/6P

SYMBOL No.	PART No.	DESCRIPTION
R134	0113599	CF 220Ω ±5% SRD1/6P
R152	0113639	CF 10KΩ ±5% SRD1/6P [for BS, ES, VS, VK]
R153	0113671	CF 220KΩ ±5% SRD1/6P
R154	0113663	CF 100KΩ ±5% SRD1/6P [for BS, ES, VS, VK]
R155	0113671	CF 220KΩ ±5% SRD1/6P [for BS, ES, VS, VK]
R156	0113631	CF 4.7KΩ ±5% SRD1/6P [for BS, ES, VS, VK]
R157	0113623	CF 2.2KΩ ±5% SRD1/6P [for BS, ES, VS, VK]
R158	0113639	CF 10KΩ ±5% SRD1/6P [for BS, ES, VS, VK]
R159	0113639	CF 10KΩ ±5% SRD1/6P
R202	0113661	CF 82KΩ ±5% SRD1/6P
R203	0113651	CF 33KΩ ±5% SRD1/6P
R204	0113627	CF 3.3KΩ ±5% SRD1/6P
R205	0113615	CF 1KΩ ±5% SRD1/6P
R206	0113615	CF 1KΩ ±5% SRD1/6P
⚠R207	1123621	NF 100Ω ±5% SRD1/4P
R208	0113633	CF 5.6KΩ ±5% SRD1/6P
R209	0113613	CF 820Ω ±5% SRD1/6P [except VS, VK, ZS]
R209	0113619	CF 1.5KΩ ±5% SRD1/6P [for VS, VK]
R209	0113617	CF 1.2KΩ ±5% SRD1/6P [for ZS]
R210	0113639	CF 10KΩ ±5% SRD1/6P
R211	0113615	CF 1KΩ ±5% SRD1/6P
R212	0113633	CF 5.6KΩ ±5% SRD1/6P
R213	0113615	CF 1KΩ ±5% SRD1/6P
⚠R214	1123629	NF 470Ω ±5% SRD1/4P
R217	0113663	CF 100KΩ ±5% SRD1/6P
R218	0113663	CF 100KΩ ±5% SRD1/6P
R219	0113627	CF 3.3KΩ ±5% SRD1/6P [for VS, VK]
R220	0113647	CF 22KΩ ±5% SRD1/6P [for VS, VK]
R221	0113661	CF 82KΩ ±5% SRD1/6P [for VS, VK]
R222	0113627	CF 3.3KΩ ±5% SRD1/6P [for VS, VK]
R223	0113607	CF 470Ω ±5% SRD1/6P [for VS, VK]
R224	0113627	CF 3.3KΩ ±5% SRD1/6P [for VS, VK]
R225	0113647	CF 22KΩ ±5% SRD1/6P [for VS, VK]
R226	0113661	CF 82KΩ ±5% SRD1/6P [for VS, VK]
R227	0113607	CF 470Ω ±5% SRD1/6P [for VS, VK]
R228	0113627	CF 3.3KΩ ±5% SRD1/6P [for VS, VK]
R229	0113623	CF 2.2KΩ ±5% SRD1/6P [for VS, VK]
R230	0113623	CF 2.2KΩ ±5% SRD1/6P [for VS, VK]
R251	0113623	CF 2.2KΩ ±5% SRD1/6P
R252	0113611	CF 680Ω ±5% SRD1/6P
R253	0113619	CF 1.5KΩ ±5% SRD1/6P
R254	0113635	CF 6.8KΩ ±5% SRD1/6P
R255	0113635	CF 6.8KΩ ±5% SRD1/6P [for BS, ES, VS, VK]
R256	0113635	CF 6.8KΩ ±5% SRD1/6P [for BS, ES, VS, VK]
R257	0113639	CF 10KΩ ±5% SRD1/6P [for BS, ES, VS, VK]
R258	0113615	CF 1KΩ ±5% SRD1/6P [for BS, ES, VS, VK]
R259	0113623	CF 2.2KΩ ±5% SRD1/6P
R260	0113639	CF 10KΩ ±5% SRD1/6P [for BS, ES, VS, VK]
R261	0113639	CF 10KΩ ±5% SRD1/6P [for BS, ES, VS, VK]
R263	0113639	CF 10KΩ ±5% SRD1/6P
R264	0113615	CF 1KΩ ±5% SRD1/6P
R266	0113639	CF 10KΩ ±5% SRD1/6P
R267	0113639	CF 10KΩ ±5% SRD1/6P [for BS, ES, VS, VK]
R268	0113639	CF 10KΩ ±5% SRD1/6P [for BS, ES, VS, VK]
R269	0113639	CF 10KΩ ±5% SRD1/6P
R310LR	0113639	CF 10KΩ ±5% SRD1/6P
R324	0113639	CF 10KΩ ±5% SRD1/6P
R330LR	0113639	CF 10KΩ ±5% SRD1/6P
R331LR	0113627	CF 3.3KΩ ±5% SRD1/6P
R334LR	0113637	CF 8.2KΩ ±5% SRD1/6P
R338LR	0113621	CF 1.8KΩ ±5% SRD1/6P
R345LR	0113615	CF 1KΩ ±5% SRD1/6P
R347LR	0113615	CF 1KΩ ±5% SRD1/6P
R350	0113633	CF 5.6KΩ ±5% SRD1/6P
R351	0113627	CF 3.3KΩ ±5% SRD1/6P
R353LR	0113655	CF 47KΩ ±5% SRD1/6P
R359LR	0113619	CF 1.5KΩ ±5% SRD1/6P
R360LR	0113611	CF 680Ω ±5% SRD1/6P
R381LR	0113649	CF 27KΩ ±5% SRD1/6P
R382LR	0113635	CF 6.8KΩ ±5% SRD1/6P
R383LR	0113651	CF 33KΩ ±5% SRD1/6P
R385LR	0113607	CF 470Ω ±5% SRD1/6P
R386LR	0113619	CF 1.5KΩ ±5% SRD1/6P
R387LR	0113587	CF 68Ω ±5% SRD1/6P
R388LR	0113615	CF 1KΩ ±5% SRD1/6P
R395	0113589	CF 82Ω ±5% SRD1/6P
R396	0113591	CF 100Ω ±5% SRD1/6P
R397	0113679	CF 470KΩ ±5% SRD1/6P
R422	0113571	CF 15Ω ±5% SRD1/6P
R423	0113635	CF 6.8KΩ ±5% SRD1/6P
R424	0113643	CF 15KΩ ±5% SRD1/6P
R427	0113651	CF 33KΩ ±5% SRD1/6P
R434	0113551	CF 2.2Ω ±5% SRD1/6P
R440	0113643	CF 15KΩ ±5% SRD1/6P
R441	0113643	CF 15KΩ ±5% SRD1/6P
R455	0113595	CF 150Ω ±5% SRD1/6P
R456	0113627	CF 3.3KΩ ±5% SRD1/6P
R463	0113627	CF 3.3KΩ ±5% SRD1/6P
R464	0113595	CF 150Ω ±5% SRD1/6P
R532	0113615	CF 1KΩ ±5% SRD1/6P
R533	0113603	CF 330Ω ±5% SRD1/6P
R535	0113663	CF 100KΩ ±5% SRD1/6P [for EW]
R536	0113655	CF 47KΩ ±5% SRD1/6P [for EW]
R550	0113633	CF 5.6KΩ ±5% SRD1/6P
R574	0113623	CF 2.2KΩ ±5% SRD1/6P
R575	0113623	CF 2.2KΩ ±5% SRD1/6P
R576	0113623	CF 2.2KΩ ±5% SRD1/6P
R577	0113623	CF 2.2KΩ ±5% SRD1/6P
R581	0113623	CF 2.2KΩ ±5% SRD1/6P
R582	0113623	CF 2.2KΩ ±5% SRD1/6P
R583	0113623	CF 2.2KΩ ±5% SRD1/6P
R584	0113623	CF 2.2KΩ ±5% SRD1/6P
R602LR	0113621	CF 1.8KΩ ±5% SRD1/6P
R604LR	0113617	CF 1.2KΩ ±5% SRD1/6P
R607LR	0113663	CF 100KΩ ±5% SRD1/6P
R608LR	0113615	CF 1KΩ ±5% SRD1/6P
R610LR	0113623	CF 2.2KΩ ±5% SRD1/6P
R611LR	0113607	CF 470Ω ±5% SRD1/6P
R612LR	0113623	CF 2.2KΩ ±5% SRD1/6P
R613LR	0113607	CF 470Ω ±5% SRD1/6P
R614LR	0113619	CF 1.5KΩ ±5% SRD1/6P
R618LR	0113655	CF 47KΩ ±5% SRD1/6P
R620LR	0113655	CF 47KΩ ±5% SRD1/6P
R629	0113201	CF 10Ω ±5% SRD1/2P
R631	0113603	CF 330Ω ±5% SRD1/6P
R633LR	0113619	CF 1.5KΩ ±5% SRD1/6P
R634LR	0113623	CF 2.2KΩ ±5% SRD1/6P
R637LR	0113675	CF 330KΩ ±5% SRD1/6P
R638LR	0113627	CF 3.3KΩ ±5% SRD1/6P
R643LR	0113615	CF 1KΩ ±5% SRD1/6P [for ZS]
R644LR	0113615	CF 1KΩ ±5% SRD1/6P [for ZS]
R645LR	0113663	CF 100KΩ ±5% SRD1/6P
R654R	0113615	CF 1KΩ ±5% SRD1/6P
R656LR	0113663	CF 100KΩ ±5% SRD1/6P
R660LR	0113621	CF 1.8KΩ ±5% SRD1/6P
R661LR	0113641	CF 12KΩ ±5% SRD1/6P
R662LR	0113681	CF 560KΩ ±5% SRD1/6P
R663LR	0113613	CF 820Ω ±5% SRD1/6P
R664LR	0113633	CF 5.6KΩ ±5% SRD1/6P
R666LR	0113611	CF 680Ω ±5% SRD1/6P
R667LR	0113607	CF 470Ω ±5% SRD1/6P
R668LR	0113661	CF 82KΩ ±5% SRD1/6P
R670	0113631	CF 4.7KΩ ±5% SRD1/6P
R671	0113639	CF 10KΩ ±5% SRD1/6P
R672LR	0113631	CF 4.7KΩ ±5% SRD1/6P
R673LR	0113611	CF 680Ω ±5% SRD1/6P
R674LR	0113639	CF 10KΩ ±5% SRD1/6P
R677	0113617	CF 1.2KΩ ±5% SRD1/6P
R678	0113659	CF 68KΩ ±5% SRD1/6P
R679	0113591	CF 100Ω ±5% SRD1/6P
R681	0113621	CF 1.8KΩ ±5% SRD1/6P
R682	0113623	CF 2.2KΩ ±5% SRD1/6P
R683	0113625	CF 2.7KΩ ±5% SRD1/6P
R691	0113629	CF 3.9KΩ ±5% SRD1/6P
R692	0113633	CF 5.6KΩ ±5% SRD1/6P
R693	0113637	CF 8.2KΩ ±5% SRD1/6P
R694	0113641	CF 12KΩ ±5% SRD1/6P
R695	0113655	CF 47KΩ ±5% SRD1/6P
R701LR	0113623	CF 2.2KΩ ±5% SRD1/6P
R702LR	0113657	CF 56KΩ ±5% SRD1/6P

SYMBOL No.	PART No.	DESCRIPTION
R703LR	0113605	CF 390Ω ±5% SRD1/6P
R704LR	0113657	CF 56KΩ ±5% SRD1/6P
R705LR	0113370	CF 2.7KΩ ±5% SRD1/2P
R706LR	0113370	CF 2.7KΩ ±5% SRD1/2P
⚠R707	1110621	FR 100Ω ±5% RN1/4B
R708	0113369	CF 1.8KΩ ±5% SRD1/2P
R709	0113369	CF 1.8KΩ ±5% SRD1/2P
⚠R710	1110621	FR 100Ω ±5% RN1/4B
R712LR	1119139	ME 4.7Ω ±10% RN2B
R714LR	0113290	CF 180Ω ±5% SRD1/2P
R715LR	0113290	CF 180Ω ±5% SRD1/2P
R716LR	0113615	CF 1KΩ ±5% SRD1/6P
R717	0113655	CF 47KΩ ±5% SRD1/6P
R718	0113623	CF 2.2KΩ ±5% SRD1/6P
R719	0113649	CF 27KΩ ±5% SRD1/6P
R730LR	0113627	CF 3.3KΩ ±5% SRD1/6P
R731LR	0113631	CF 4.7KΩ ±5% SRD1/6P
R732	0113607	CF 470Ω ±5% SRD1/6P
R732LR	1119123	ME 0.22Ω ±10% RN2B
R733	0113633	CF 5.6KΩ ±5% SRD1/6P [AMP P.W.B.]
R733	0113607	CF 470Ω ±5% SRD1/6P [MAIN P.W.B.]
R734LR	0129531	CF 10Ω ±5% SRD1/4P
R802	0113651	CF 33KΩ ±5% SRD1/6P
R803	0113623	CF 2.2KΩ ±5% SRD1/6P
R804	0113615	CF 1KΩ ±5% SRD1/6P
⚠R805	1118445	FR 4.7Ω ±5% RN1/4B
R806	0129601	CF 1KΩ ±5% SRD1/4P
R807	0113619	CF 1.5KΩ ±5% SRD1/6P
⚠R813	1110609	FR 47Ω ±5% RN1/4B
⚠R814	1110609	FR 47Ω ±5% RN1/4B
R816	0113370	CF 2.7KΩ ±5% SRD1/2P
R817	0129601	CF 1KΩ ±5% SRD1/4P
R819	0113615	CF 1KΩ ±5% SRD1/6P
R825	0129579	CF 560Ω ±5% SRD1/4P
R828	0113615	CF 1kΩ ±5% SRD1/6P
⚠R837	1118445	FR 4.7Ω ±5% RN1/4B
R838	0113639	CF 10KΩ ±5% SRD1/6P
R839	0113449	CF 10KΩ ±5% SRD1/2P
R841	0113647	CF 22KΩ ±5% SRD1/6P
R842	0113663	CF 100KΩ ±5% SRD1/6P
R844	0113657	CF 56KΩ ±5% SRD1/6P
R845	0113643	CF 15KΩ ±5% SRD1/6P
R846	0113295	CF 470Ω ±5% SRD1/2P
R847	0113295	CF 470Ω ±5% SRD1/2P
R848LR	0113663	CF 100KΩ ±5% SRD1/6P
R852	0113649	CF 27KΩ ±5% SRD1/6P
⚠R856	1118445	FR 4.7Ω ±5% RN1/4B
R860	0113655	CF 47KΩ ±5% SRD1/6P
R901	0113647	CF 22KΩ ±5% SRD1/6P
R902	0113663	CF 100KΩ ±5% SRD1/6P
R903	0113647	CF 22KΩ ±5% SRD1/6P
R904	0113655	CF 47KΩ ±5% SRD1/6P
R905	0113603	CF 330Ω ±5% SRD1/6P
R906	0113639	CF 10KΩ ±5% SRD1/6P
R907	0113603	CF 330Ω ±5% SRD1/6P
R908	0113639	CF 10KΩ ±5% SRD1/6P
R909	0113639	CF 10KΩ ±5% SRD1/6P
R910	0113657	CF 56KΩ ±5% SRD1/6P
R917	0113657	CF 56KΩ ±5% SRD1/6P

SYMBOL No.	PART No.	DESCRIPTION
R920	0113635	CF 6.8KΩ ±5% SRD1/6P
R921	0113635	CF 6.8KΩ ±5% SRD1/6P
R922	0113615	CF 1KΩ ±5% SRD1/6P
R923	0113639	CF 10KΩ ±5% SRD1/6P
R924	0113647	CF 22KΩ ±5% SRD1/6P
R944	0113657	CF 56KΩ ±5% SRD1/6P
R946	0113563	CF 6.8Ω ±5% SRD1/6P
R947	0113563	CF 6.8Ω ±5% SRD1/6P
R950	0113563	CF 6.8Ω ±5% SRD1/6P
R951	0113563	CF 6.8Ω ±5% SRD1/6P
R962	0113555	CF 3.3Ω ±5% SRD1/6P
R963	0113555	CF 3.3Ω ±5% SRD1/6P

ICs & TRANSISTORS

SYMBOL No.	PART No.	DESCRIPTION
M601	2377711	TM1060
M901	2377781	IR module
IC101	2368431	AN278
IC102	2301121	LA1266
IC201	2300631	BA1332L
IC251	2301681	LC7217
IC302	2301711	μPC1290C
IC303	2301731	LA3246
IC304	2387301	M5218P
IC305	2301201	HA12086
IC307	2301741	LA3240
IC501	2301613	HD63A01Y0C60P
IC502	2368791	TC4028BP
IC503	2369411	MSM58371
IC602	2301691	LC7821
IC604	2387301	M5218P
IC606	2301701	BA6209N
IC651	2387301	M5218P
IC652	2387241	IR3702
IC653	2387241	IR3702
IC701	2301151	STK4192 II
IC801	2387581	μPC1237H
IC901	2300658	μPD7516HCW-287
Q101	2318303	2SC1704S(S) [for ZS]
Q102	2328802	2SK104(F) [for ZS]
Q103	2318292	2SA933S(R)
Q104	2318303	2SC1740S(S)
Q105	2318303	2SC1740S(S)
Q106	2318303	2SC1740S(S)
Q151	2318303	2SC1740S(S) [for BS, ES, VS, VK]
Q152	2318303	2SC1740S(S) [for BS, ES, VS, VK]
Q201	2318303	2SC1740S(S)
Q202	2318303	2SC1740S(S) [for VS, VK]
Q203	2318303	2SC1740S(S) [for VS, VK]
Q251	2318303	2SC1740S(S)
Q252	2318303	2SC1740S(S)
Q253	2318303	2SC1740S(S) [for BS, ES, VS, VK]
Q254	2318303	2SC1740S(S) [for BS, ES, VS, VK]
Q255	2318292	2SA933S(R)

SYMBOL No.	PART No.	DESCRIPTION
Q256	2318292	2SA933S(R) [for BS, ES, VS, VK]
Q257	2318292	2SA933S(R) [for BS, ES, VS, VK]
Q258	2318292	2SA933S(R)
Q301	2318222	DTC124EST
Q303	2318222	DTC124EST
Q304	2318222	DTC124EST
Q305	2318222	DTC124EST
Q306	2318222	DTC124EST
Q307LR	2329316	2SC1741QR
Q309LR	2318222	DTC124EST
Q310	2318222	DTC124EST
Q311	2318222	DTC124EST
Q312LR	2329316	2SC1741QR
Q313	2318222	DTC124EST
Q314LR	2317971	2SD1468(R)
Q318LR	2329316	2SC1741QR
Q319	2318222	DTC124EST
Q320LR	2318222	DTC124EST
Q410	2318222	DTC124EST
Q411	2318303	2SC1740S(S)
Q412	2318222	DTC124EST
Q413	2327333	2SC1213C
Q414	2327333	2SC1213C
Q416	2318222	DTC124EST
Q421	2318303	2SC1740S(S)
Q430	2318282	2SD468CTZ
Q451	2318222	DTC124EST
Q452	2318292	2SA933S(R)
Q453	2317741	2SD1111
Q454	2317741	2SD1111
Q455	2317741	2SD1111
Q456	2318222	DTC124EST
Q461	2318292	2SA933S(R)
Q462	2317741	2SD1111
Q463	2317741	2SD1111
Q464	2317741	2SD1111
Q465	2318222	DTC124EST
Q501	2318303	2SC1740S(S)
Q502	2318303	2SC1740S(S)
Q503	2318303	2SC1740S(S)
Q530	2318292	2SA933S(R) [for EW]
Q601LR	2318303	2SC1740S(S)
Q602LR	2318303	2SC1740S(S)
Q603LR	2329316	2SC1741QR
Q701	2318292	2SA933S(R)
Q702LR	2327893	2SA872E
Q801	2318303	2SC1740S(S)
Q802	2318303	2SC1740S(S)
Q803	2317832	2SB834(Y)
Q807	2318303	2SC1740S(S)
Q808	2317803	2SD1266(P)
Q812	2317803	2SD1266(P)
Q813	2317822	2SD880(Y)
Q817	2317822	2SD880(Y)
Q819	2318342	2SA1534A(R)
Q820	2318303	2SC1740S(S)
Q830	2318303	2SC1740S(S)
Q901	2318303	2SC1740S(S)

SYMBOL No.	PART No.	DESCRIPTION
Q902	2318303	2SC1740S(S)
Q903	2318292	2SA933S(R)
Q904	2318292	2SA933S(R)
Q907	2329582	2SA933T(R)
		DIODES
D101	2398611	1SS254
D102	2398611	1SS254
D103	2337931	1K60R [for ZS]
D104	2337931	1K60R [for ZS]
D151	2397321	KV1260
D152	2397321	KV1260 [for BS, ES, VS, VK]
D153	2398611	1SS254
D154	2398611	1SS254
D155	2398611	1SS254 [for BS, ES, VS, VK]
D156	2398611	1SS254 [for BS, ES, VS, VK]
D157	2398611	1SS254 [for BS, ES, VS, VK]
D158	2398611	1SS254 [for BS, ES, VS, VK]
D159	2398611	1SS254 [for BS, ES, VS, VK]
D251	2398611	1SS254
D252	2398611	1SS254
D301	2398611	1SS254
D302	2398611	1SS254
D303	2398611	1SS254
D304	2398611	1SS254
D305	2398611	1SS254
D306	2398611	1SS254
D381	2398611	1SS254
D382	2398611	1SS254
D383	2398611	1SS254
D385	2398611	1SS254
D402	2398611	1SS254
D403	2398611	1SS254
D404	2398611	1SS254
D405	2398611	1SS254
D406	2398611	1SS254
D407	2398611	1SS254
D409	2398611	1SS254
D410	2398611	1SS254
D412	2398611	1SS254
D413	2398611	1SS254
D414	2398611	1SS254
D415	2398611	1SS254
D416	2398611	1SS254
D417	2398611	1SS254
D418	2398611	1SS254
D419	2398611	1SS254
D420	2398611	1SS254
D501	2398611	1SS254
D502	2398611	1SS254
D507	2398611	1SS254
D508	2398611	1SS254

SYMBOL No.	PART No.	DESCRIPTION
D510	2398611	1SS254
D511	2398611	1SS254
D516	2398611	1SS254
D517	2398611	1SS254
D518	2398611	1SS254 [for BS, ES, VS, VK]
D519	2398611	1SS254
D520	2398611	1SS254
D521	2398611	1SS254
D522	2398611	1SS254
D523	2398611	1SS254
D524	2398611	1SS254
D525	2398611	1SS254
D550	2398611	1SS254
D551	2337762	ERB12-01
D602	2398611	1SS254
D653	2337931	1K60R
D701	2337151	1S2076A
D702	2337762	ERB12-01
D703	2337762	ERB12-01
D704	2398611	1SS254
D705LR	2337151	1S2076A
D801	2398611	1SS254
D802	2337762	ERB12-01
D803	2337762	ERB12-01
D804	2337762	ERB12-01
D805	2337762	ERB12-01
D806	2337762	ERB12-01
D807	2337762	ERB12-01
D810	2337762	ERB12-01
D811	2337151	1S2076A
D814	2337461	S4VB20
D901	2398611	1SS254
D902	2398611	1SS254
D911	2398611	1SS254
D912	2398611	1SS254
D913	2398611	1SS254
D914	2398611	1SS254
D915	2398611	1SS254
D916	2398611	1SS254
D923	2398611	1SS254
D924	2398611	1SS254
D925	2398611	1SS254
D926	2398611	1SS254
D001	2337524	HZ9B1
D002	2337524	HZ9B1
D003	2337524	HZ9B1
ZD101	2337189	HZ-15-3
ZD301	2337527	HZ9C1
ZD501	2337624	HZ-4B-1
ZD601	2337587	HZ5C1
D611	2337524	HZ9B1
D612	2377611	HZ-3A-1
D613	2377611	HZ-3A-1
D614	2337524	HZ9B1
ZD802	2337527	HZ9C1
ZD803	2337583	HZ-5A-3
ZD804	2338654	RD27EB4
ZD805	2337529	HZ-9C3
ZD806	2337552	HZ-11A(2)
ZD807	2337541	HZ-7A-1

SYMBOL No.	PART No.	DESCRIPTION
ZD809	2337566	HZ12B-3
ZD901	2337527	HZ9C1
D950	2337524	HZ9B1
D951	2337524	HZ9B1
D952	2337524	HZ9B1
D573	2398661	SLR-34VC70F102
D574	2398661	SLR-34VC70F102
D581	2398671	SLR-34DC35HDL
D582	2398671	SLR-34DC35HDL
D584	2398671	SLR-34DC35HDL
D585	2398671	SLR-34DC35HDL
D586	2398671	SLR-34DC35HDL
D601	2347323	SLC-22DU
D903	2398651	SLR-54DC70F165DL
D904	2398651	SLR-54DC70F165DL
D905	2398651	SLR-54DC70F165DL
D906	2398651	SLR-54DC70F165DL
D907	2398403	SLR-54DC3
D908	2398403	SLR-54DC3
		VARIABLE RESISTORS
RT201	0158977	4.7kΩ-(B) (19kHz FREE RUNNING ADJ.)
RT301LR	0158971	10kΩ-(B) (PALYBACK GAIN ADJ.)
RT303LR	0158971	10kΩ-(B) (REC/PLAY GAIN ADJ.)
RT401LR	0158973	100kΩ-(B) (BIAS CURRENT ADJ.)
RT451	0158970	3.3kΩ-(B) (NORMAL SPEED ADJ.)
RT452	0158970	3.3kΩ-(B) (HIGH SPEED ADJ.)
RT453	0158970	3.3kΩ-(B) (NORMAL SPEED ADJ.)
RT454	0158970	3.3kΩ-(B) (HIGH SPEED ADJ.)
R628	0189116	Motor volume 30kΩ-(B) (VOLUME CONTROL)
R655	0189171	200kΩ-(Special W) (BALANCE CONTROL)
R659	0158847	50kΩ-(C) (BASS CONTROL)
R665	0158847	50kΩ-(C) (TREBLE CONTROL)
		COILS & TRANSFORMERS
L151	2137373	AM ANT coil (MW)
L152	2137374	AM ANT coil (LW) [for BS, ES, VS, VK]
L153	2136493	AM OSC coil
L154	2136494	LW OSC coil [for BS, ES, VS, VK]
L301LR	2227395	Choke coil
L381LR	2228211	Choke coil
L403	2137343	Bias OSC coil [except BS, ES, VS, VK]
L403	2137344	Bias OSC coil [for BS, ES VS, VK]
L405	2227396	Choke coil
L501	2228191	Choke coil
L502	2228191	Choke coil
L701LR	2227361	Audio trap coil
L801	2228191	Choke coil [for ZS]
L802	2228191	Choke coil [for ZS]

SYMBOL No.	PART No.	DESCRIPTION
L901	2228191	Choke coil
L902	2228191	Choke coil
T101	2154493	AM IF transformer
T102	2137033	FM discriminater coil
		MISCELLANEOUS
JK101	2689542	4P antenna terminal [except ZS]
JK101	2689543	4P antenna terminal [for ZS]
JK601	2678347	6P US pin jack
JK602	2678842	2P US pin jack
JK701	2678495	Headphones jack
SPT701	2689651	Terminal (4P)
CP101	2136941	Band pass filter [for ZS]
CP201	2136312	Anti birdie filter [for ZS, VS, VK]
CP202	2136311	Reak filter [for VS, VK]
CP203	2136311	Reak filter [for VS, VK]
CP301LR	2228104	Dolby filter
CP361LR	2137951	Bias trap coil
CP901	0241911	Capacitor array 220P x 12
CP902	0241912	Capacitor array 220P x 8
RY701	2647751	Relay
MD101	2425671	FM tuner pack [except ZS]
MD101	2425731	FM tuner pack [for ZS]
FL901	2780391	Fluorescent display tube
FL903	2380401	Fluorescent display tube
MF101	2135002	Ceramic filter
MF102	2135002	Ceramic filter
MF103	2135002	Ceramic filter
MF104	2155421	AM ceramic filter
X251	2780381	Crystal oscillator
X501	2155361	Crystal oscillator
X901	2155323	Crystal oscillator
⚠F001	2727743	Fuse T1.25A [for BS]
⚠F001	2727192	Fuse 1.25A [except BS]
⚠F801	2727194	Fuse T1.6A [except BS]
⚠F801	2727744	Fuse T1.6A [for BS]
⚠F802	2727194	Fuse T1.6A [except BS]
⚠F802	2727744	Fuse T1.6A [for BS]
⚠F803	2727738	Fuse T400mA [for BS]
⚠F803	2727492	Fuse T400mA [except BS]
S301	2628611	Slide switch (DOLBY NR)
S501	2628611	Slide switch (MODE)
S512	2639682	Tact switch (STOP 1)
S513	2639682	Tact switch (STOP 2)
S521	2639682	Tact switch (REC 2)

SYMBOL No.	PART No.	DESCRIPTION
S522	2639682	Tact switch (F.PLAY 1)
S523	2639682	Tact switch (F.PLAY 2)
S524	2639682	Tact switch (PAUSE 2)
S531	2639682	Tact switch (HIGH SPEED DUBBING)
S532	2639682	Tact switch (R.PLAY 1)
S533	2639682	Tact switch (R.PLAY 2)
S541	2639682	Tact switch (CD REC)
S542	2639682	Tact switch (FF 1)
S543	2639682	Tact switch (FF 2)
S544	2639682	Tact switch (MUTE 2)
S552	2639682	Tact switch (REW 1)
S553	2639682	Tact switch (REW 2)
S561	2627531	Slide switch (SPACING) [for EW]
S651	2600422	1 Key push switch (TONE DEFEAT)
S901	2638241	Tact switch (POWER)
S904	2639682	Tact switch (UP)
S905	2639682	Tact switch (DOWN)
S906	2639682	Tact switch (P1)
S907	2639682	Tact switch (P2)
S908	2639682	Tact switch (P3)
S909	2639682	Tact switch (P4)
S910	2639682	Tact switch (P5)
S911	2639682	Tact switch (P6)
S912	2639682	Tact switch (P7)
S913	2639682	Tact switch (P8)
S914	2639682	Tact switch (P9)
S915	2639682	Tact switch (P10)
S916	2639682	Tact switch (10+)
S917	2639682	Tact switch (MEMORY)
S918	2639682	Tact switch (AUX)
S919	2639682	Tact switch (CD)
S920	2639682	Tact switch (TUNER)
S921	2639682	Tact switch (PHONO)
S922	2639682	Tact switch (TAPE)
S924	2639682	Tact switch (BAND SELECT)
S928	2639682	Tact switch (FM MODE)
S929	2639682	Tact switch (RANDOM PLAY)
S930	2638241	Tact switch (RANDOM SCAN)
S931	2639682	Tact switch (LONG PLAY)
	3960402	LED holder (A)
H901	3967255	FL spacer
H902	3908911	FL spacer
H903	3967255	FL spacer
H904	3967255	FL spacer
		for ACCESSORIES
	2589362	Remo-con unit (RB-58)
⚠	2727199	Fuse T2.5A 250V [for EW]
	2757528	FM antenna [except ZS]
	3640411	AM loop antenna

SYMBOL No.	PART No.	DESCRIPTION
		CABINET CHASSIS
1	4044323	Front panel assy
2	3307713	Eject button
3	3308692	Eject lever
4	4044153	Cassette clear assy
5	4044152	Cassette clear assy
6	3806482	Cassette holder
7	3392003	Eject spring (L)
8	3392004	Eject spring (R)
9	3950383	Damper
10	4691371	Counter belt
11	2588483	Tape counter
12	2589311	Mechanism assy (HTY-3600D) (TAPE 2)
13	2589301	Mecahnism sssy (HTY-3300D) (TAPE 1)
14	3308631	Power button
15	3307721	Slide Knob
16	3308701	VolumeKnob
17	3306843	VolumeKnob
18	3958758	Push button
19	3307641	Tact button
20	3308711	Preset button
21	3308642	Timer button
22	3308674	Function button
23	3308664	Button
24	3308651	Operation button (R)
25	3308653	Operation button (L)
26	3927411	Foot
27	4477301	Cover
⚠28	0043793	Bushing (for EW)
⚠	3913006	Bushing (except EW)
29	4477273	Side plate (R)
30	4477275	Side plate (L)
31	4477569	Rear plate (A) (for EW)
	4477568	Rear plate (A) (except EW)
32	4575661	Earth screw
33	4408861	Washer
34	4567422	DT bindhead screw (4 ϕ x 8) (power transformer)
35	4567455	DT bindhead screw (3 ϕ x 14) (AMP P.W.B.)
36	4567432	DT bindhead screw (3 ϕ x 8) (front panel)
37	4567413	Bind head screw (3 ϕ x 10) (foot)
38	4567431	DT bindscrew (3 ϕ x 6) (rear plate, cover, chassis holder)
39	4784106	Tappingpind head screw (3 ϕ x 10) (terminal)
40	4567443	DT bindhead screw (4 ϕ x 10) (cover)
41	4567412	DT bindhead screw (3 ϕ x 8) (rug terminal)
42	8691410	BT bindhead screw (3 ϕ x 10) (side plate, DISPLAY P.W.B., MIC P.W.B.)

SYMBOL No.	PART No.	DESCRIPTION
43	4567411	DT bind head screw (3 ϕ x 6) (MAIN P.W.B. cassette chassis)
44	8691414	BT bind head screw (3 ϕ x 14) (shield plate)
45	4577831	BT flat head screw (cassette chassis)
46	8691310	BT screw (2.6 ϕ x 10) (counter, switch P.W.B.)
⚠47	2249992	Power transformer (2.15kg 117VA) (except BS, SA, EW)
⚠	2249993	Power transformer (2.15kg 117VA) (for BS, SA)
⚠	2249994	Power transformer (for EW)
⚠48	2618053	Voltage select switch (for EW)
⚠49	2658481	AC outlet (for EW)
⚠50	2712101	Power supply cord (for ZS, ES, VS, KS, VK)
⚠	2749582	Power supply cord (for BS)
⚠	2749622	Power supply cord (for SA)
⚠	2718113	Power supply cord (for EW)
51	2137381	Line filter (for ZS)
52	4573552	Tapping bind head screw (3 ϕ x 16) (IC701)

CASSETTE CHASSIS

SYMBOL No.	PART No.	DESCRIPTION
1	4846531	Reel (L) assy
2	4847531	Reel (R) assy
3	4846831	Mechanism base assy
4	4846451	FR arm assy
5	4846001	FR gear
6	4846031	FR arm A spring
7	4846231	FR arm B spring
8	4846061	REW gear
9	4846601	Trigger arm (FR-B)
10	4846991	FR cam gear
11	4846631	Reel cap
12	4845981	Reel B spring
13	4816011	Washer (1.6 ϕ x 3.5 x 0.5)
14	4846861	Brake arm
15	4846021	Brack spring
16	4846522	Cluth assy
17	4846801	FR lever
18	4851801	FR lever spring (C)
19	4846501	RV lever assy (A)
20	4845991	RV lever spring
21	4846571	FR shift arm
22	4846671	Select arm
23	4845901	FR shift spring
24	4847001	PL cam gear
25	4846491	Trigger arm assy
26	4845921	PL trigger spring
27	4833591	Tapping screw (2 ϕ x 5)
28	4846581	Housing (R)
29	4846591	Housing (L)
30	4816041	Screw (2 ϕ x 4)
31	4846741	PLAY gear arm
32	4846111	PLAY gear
33	4846301	PL arm collar
34	4816061	Screw (2 ϕ x 5)
35	4845891	PLAY arm spring
36	4846051	Cassette guide
37	4846681	RV arm
38	4846971	Head chassis
39	4846611	Head chassis spring
40	4846411	Shift arm assy
41	7783501	Special screw
42	4845911	Shift arm spring
43	4846911	RV lever (B)
44	4846641	Tape guide (R)
45	4846851	Tape guide (L)
46	4845931	Tape guide spring
47	4846871	Rotation head (P) assy (TAPE 1)
	4846882	Rotation head (R/P) assy (TAPE 2)
48	4846432	P roller assy (R)
49	4846442	P roller assy (L)
50	4845941	P roller RA spring
51	4845961	P roller RB spring
52	4845951	P roller LA spring
53	4845971	P roller LB spring
54	4846562	Solenoid assy
55	4847351	Pan head screw (2 ϕ x 3)
56	4846541	Flywheel (RB)
57	4847221	Flywheel gear (B)
58	4846551	Flywheel (LB)
59	4846381	Polyslider washer (2.3 ϕ x 5 x 0.25)
60	4847561	Polyslider washer (2.6 ϕ x 4.7 x 0.25)
61	4846891	Nylon washer (2.4 ϕ x 5 x 0.5)
62	4846901	Nylon washer (2.1 ϕ x 5 x 0.5)
63	4846471	Clutch belt
64	4847211	Capstan spacer
65	4825251	Leaf switch
66	4847251	Motor assy
67	4847281	Lock washer
68	8711303	Pan head screw (2.6 ϕ x 3)
69	8691106	BT bind head screw (2 ϕ x 6)
70	4847102	Eject lock arm (L) (TAPE 1)
	4847061	Eject lock arm (R) (TAPE 2)
71	4847111	Eject lock arm spring (L) (TAPE 1)
	4847071	Eject lock arm spring (R) (TAPE 2)
72	4847041	Eject lever (L) (TAPE 1)
	4847021	Eject lever (R) (TAPE 2)
73	4847051	Eject holder (L) (TAPE 1)
	4847031	Eject holder (R) (TAPE 2)
74	4851791	Eject lever spring (B)
75	4847091	Lock arm collar
76	4847361	Bind tapping screw (2 ϕ x 10)
77	4846962	SW protector
78	4846621	SW arm
79	4846281	Pack spring
80	4851781	REC switch
81	4846481	Reflective sensor
82	4847301	PLAY switch
83	4816051	Screw (2 ϕ x 4)
84	4847371	Bind tap tight screw (2 ϕ x 6)
85	4847341	Head P.W.B.
86	4846461	Drive belt
87	4877771	RV lever collar
88	4846122	Polyslider washer (2.2 ϕ x 4.5 x 0.25)

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